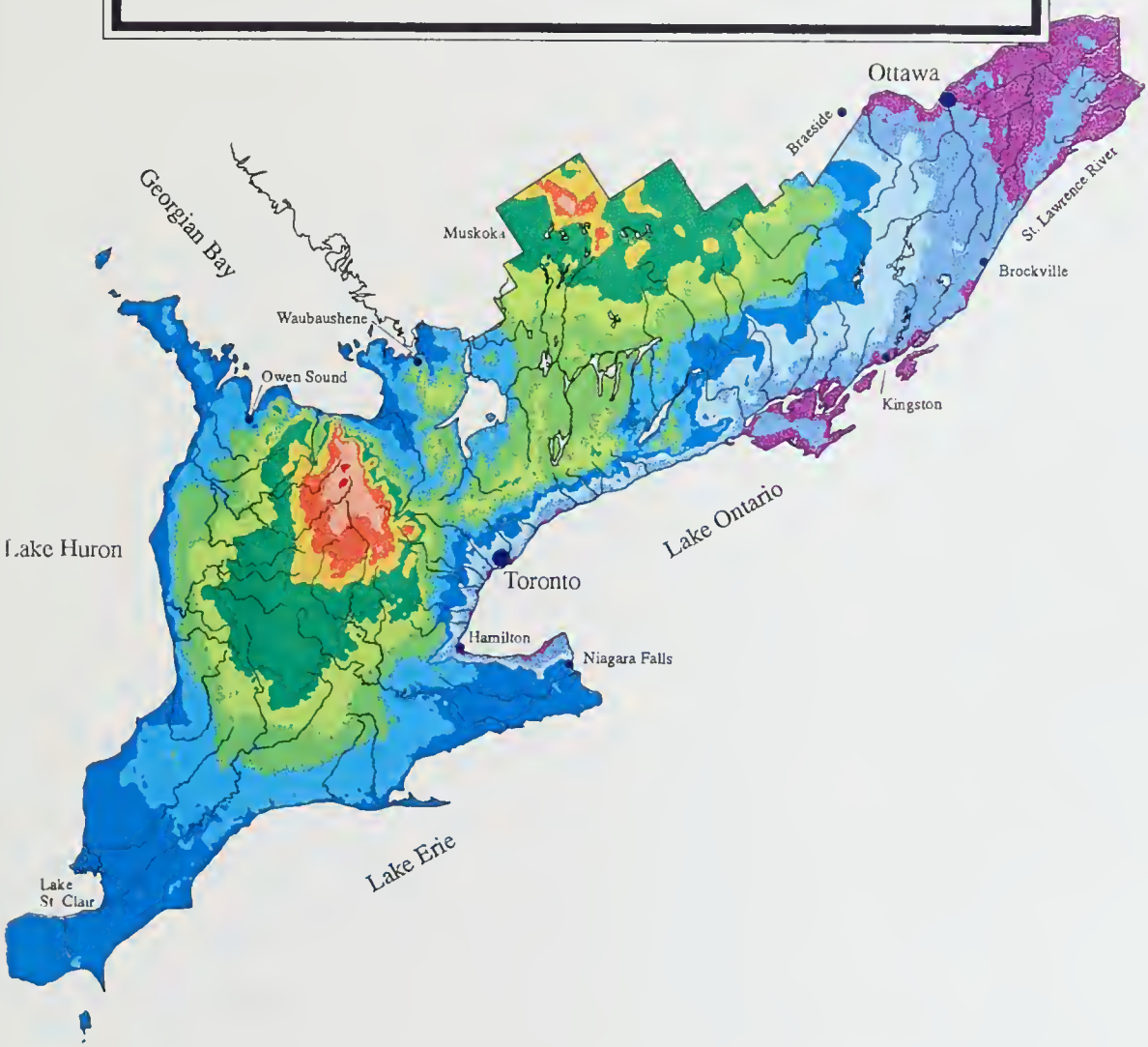
THE HYDROGEOLOGY OF SOUTHERN ONTARIO

(FIGURES)



Ministry of Environment and Energy

Ontario

Hydrogeology of Ontario
Series (Report 1)

THE HYDROGEOLOGY OF SOUTHERN ONTARIO

VOLUME 2
(FIGURES)

BY

S.N. SINGER, C.K. CHENG, AND M.G. SCAFE

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TORONTO ONTARIO

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PREFACE

This report describes the hydrogeology of southern Ontario in terms of the hydraulic parameters of various bedrock and overburden units, and the geologic conditions under which ground water flow systems operate. In addition, the report provides an assessment of the long-term ground water recharge and discharge, and an evaluation of ground water quality. The report is intended to provide basic hydrogeologic information that can be used for the wise management of the ground water resources in southern Ontario.

Toronto, June 1995

TABLE OF CONTENTS

(VOLUME 1)

		Page
1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION	3
2.1	THE SIGNIFICANCE OF ONTARIO'S GROUND WATER RESOURCES	3
2.2	IMPORTANCE OF SCALE IN HYDROGEOLOGIC STUDIES	4
2.3	PURPOSE AND SCOPE OF THE STUDY	5
2.4	LOCATION	5
2.5	RELEVANT INVESTIGATIONS	5
2.6	PREVIOUS HYDROGEOLOGIC INVESTIGATIONS	6
2.7	ACKNOWLEDGEMENTS	8
3.	GEOGRAPHY	9
3.1	PHYSIOGRAPHY	9
3.2	DRAINAGE	10
3.3	CLIMATE	11
4.	DATA AND METHODS USED IN THE STUDY	13
4.1	DATA USED IN THE STUDY	13
4.2	THE WATER WELL INFORMATION SYSTEM	13
4.3	THE RAISON GIS SYSTEM	14
5.	HYDROGEOLOGIC DEFINITIONS	16
5.1	GROUND WATER	16
5.2	AQUIFERS	16
5.3	HYDRAULIC PARAMETERS	17
6.	GROUND WATER OCCURRENCE IN THE BEDROCK	20
6.1	BEDROCK TOPOGRAPHY	20
6.1.1	Dundalk Dome	21
6.1.2	Bedrock Valleys	21
6.2	PRECAMBRIAN ROCKS	21
6.2.1	Precambrian Hydrogeologic Unit	22
6.3	PALAEOZOIC ROCKS	22
6.3.1	Early Cambrian Strata	23
6.3.2	Upper Cambrian and Lower Ordovician Strata	23
6.3.2.1	Nepean-March-Oxford Hydrogeologic Unit	23
6.3.3	Middle to Late Ordovician Strata in Eastern and Central Ontario	24
6.3.3.1	Rockcliffe Hydrogeologic Unit	25
6.3.3.2	Ottawa Group Hydrogeologic Unit	25
6.3.3.3	Simcoe Group Hydrogeologic Unit	25
6.3.4	Upper Ordovician Strata in Eastern and Central Ontario	26
6.3.4.1	Billings-Carlsbad-Queenston Hydrogeologic Unit	26
6.3.4.2	Blue Mountain-Georgian Bay Hydrogeologic Unit	27
6.3.4.3	Queenston Hydrogeologic Unit	27
6.3.5	Lower Silurian Strata	28
6.3.5.1	Cataract Group Hydrogeologic Unit	28

		Page
6.3.6	Middle Silurian Strata	28
6.3.6.1	Dyer-Wingfield-St. Edmund Hydrogeologic Unit	29
6.3.6.2	Clinton Group Hydrogeologic Unit	30
6.3.6.3	Amabel-Lockport-Guelph Hydrogeologic Unit	30
6.3.7	Upper Silurian Strata	32
6.3.7.1	Salina Hydrogeologic Unit	32
6.3.7.2	Bass Island Hydrogeologic Unit	32
6.3.8	Lower Devonian Strata	33
6.3.8.1	Bois Blanc Hydrogeologic Unit	33
6.3.9	Middle Devonian Strata	34
6.3.9.1	Detroit River Group Hydrogeologic Unit	34
6.3.9.2	Dundee Hydrogeologic Unit	35
6.3.9.3	Hamilton Group Hydrogeologic Unit	35
6.3.10	Upper Devonian and Mississipian Strata	35
6.3.10.1	Kettle Point Hydrogeologic Unit	36
6.4	A COMPARISON OF THE WATER-YIELDING CAPABILITIES AMONG VARIOUS BEDROCK HYDROGEOLOGIC UNITS	36
7.	GROUND WATER OCCURRENCE IN THE OVERBURDEN	37
7.1	OVERBURDEN THICKNESS	38
7.2	ILLINOIAN GLACIAL DEPOSITS	38
7.3	SANGAMONIAN INTERGLACIAL DEPOSITS	38
7.4	EARLY WISCONSINAN DEPOSITS	38
7.5	MIDDLE WISCONSINAN DEPOSITS	39
7.6	LATE WISCONSINAN DEPOSITS AND CHARACTERISTICS OF WATER WELLS IN AREAS WHERE THESE DEPOSITS OUTCROP AT THE SURFACE	39
7.6.1	Nissouri Stadial Deposits	39
7.6.1.1	Catfish Creek Till	39
7.6.2	Erie Interstadial Deposits	40
7.6.3	Port Bruce Stadial Deposits	40
7.6.3.1	Deposits Associated with the Combined Erie-Ontario Lobe	40
7.6.3.1.1	Maryhill Till	40
7.6.3.1.2	Port Stanley Till	41
7.6.3.2	Deposits Associated with the Combined Huron-Georgian Bay Lobe	41
7.6.3.2.1	Tavistock Till	42
7.6.3.2.2	Mornington Till	42
7.6.3.2.3	Stratford Till	43
7.6.3.3	Deposits Associated with the Georgian Bay Lobe	43
7.6.3.3.1	Elma Till	43
7.6.3.3.2	Dunkeld Till	44
7.6.3.4	Deposits Associated with the Huron Lobe	44
7.6.3.4.1	Rannoch Till	44
7.6.3.5	Deposits Associated with the Simcoe Lobe	44
7.6.3.5.1	Newmarket Till	44
7.6.3.6	Glaciofluvial and Glaciolacustrine Deposits Associated with the Port Bruce Stade	45
7.6.4	Mackinaw Interstadial Deposits	45
7.6.4.1	Wentworth Till	45
7.6.5	Port Huron Stadial Deposits	46
7.6.5.1	Halton Till	46

		Page
7.6.5.2	Kettleby Till	47
7.6.5.3	St. Joseph Till	47
7.6.6	Two Creeks Interstadial Deposits	48
7.6.6.1	Quaternary Unit 18	48
7.6.6.2	Quaternary Unit 19	48
7.6.6.3	Quaternary Unit 20	49
7.6.6.4	Quaternary Unit 21	49
7.6.7	Greatlakean Stade Deposits	50
7.6.8	Glaciofluvial, Glaciolacustrine, Glaciomarine and Marine Deposits	50
7.6.8.1	Ice-Contact Deposits	51
7.6.8.2	Outwash Deposits	52
7.6.8.3	Sands and Gravels of Glaciolacustrine Origin	52
7.6.8.4	Sands and Gravels of Glaciomarine and Marine Origins	52
7.6.8.5	Silts and Clays of Glaciolacustrine Origin	53
7.6.8.6	Silts and Clays of Glaciomarine and Marine Origins	53
7.7	HOLOCENE (RECENT) DEPOSITS	53
8.	GROUND WATER FLOW SYSTEMS	55
9.	LONG-TERM GROUND WATER RECHARGE AND DISCHARGE	57
9.1	GROUND WATER AND THE HYDROGEOLOGIC CYCLE	57
9.2	SOIL MOISTURE AND GROUND WATER RECHARGE	57
9.3	TIMING OF GROUND WATER RECHARGE IN SOUTHERN ONTARIO	57
9.4	QUANTITATIVE ASSESSMENT OF GROUND WATER DISCHARGE AND RECHARGE	58
10.	GROUND WATER QUALITY	60
10.1	GROUND WATER QUALITY IN THE BEDROCK	61
10.1.1	Precambrian Hydrogeologic Unit	62
10.1.2	Nepean-March-Oxford Hydrogeologic Unit	62
10.1.3	Rockcliffe Hydrogeologic Unit	63
10.1.4	Ottawa Group Hydrogeologic Unit	63
10.1.5	Simcoe Group Hydrogeologic Unit	63
10.1.6	Billings-Carlsbad-Queenston Hydrogeologic Unit	64
10.1.7	Blue Mountain-Georgian Bay Hydrogeologic Unit	64
10.1.8	Queenston Hydrogeologic Unit	64
10.1.9	Clinton Group-Cataract Group Hydrogeologic Units	65
10.1.10	Amabel-Lockport-Guelph Hydrogeologic Unit	65
10.1.11	Salina Hydrogeologic Unit	66
10.1.12	Bass Island Hydrogeologic Unit	66
10.1.13	Bois Blanc Hydrogeologic Unit	67
10.1.14	Detroit River Group Hydrogeologic Unit	67
10.1.15	Dundee Hydrogeologic Unit	68
10.1.16	Hamilton Group Hydrogeologic Unit	68
10.1.17	Kettle Point Hydrogeologic Unit	69
10.2	GROUND WATER QUALITY IN THE OVERBURDEN	69
10.2.1	Sodium	70
10.2.2	Iron	70
10.2.3	Chloride	70
10.2.4	Nitrate	70
10.2.5	Sulphate	71

		Page
10.2.6	Hardness	71
10.2.7	Total Dissolved Solids	71
10.2.8	Overburden Ground water Types	71
10.3	GENERAL CHARACTERISTICS OF NATURAL GROUND WATER QUALITY ENCOUNTERED IN BEDROCK AND OVERBURDEN WELLS	71
11.	CONCLUSIONS	73
REFERENCES		75
TABLES		T1-T25

(VOLUME 2)

FIGURES

(VOLUME 3)

APPENDIX I METHODOLOGY

APPENDIX II TRANSMISSIVITY-PROBABILITY GRAPHS AND SPECIFIC CAPACITY-PROBABILITY GRAPHS

APPENDIX III WATER QUALITY DATA FOR BEDROCK WELLS

APPENDIX IV WATER QUALITY DATA FOR OVERBURDEN WELLS

LIST OF TABLES

		Page
Table 1	Kind of water encountered in bedrock wells by county	T1
Table 2	Water-yielding capabilities of various bedrock hydrogeologic units in southern Ontario	T2
Table 3	Kind of water encountered in overburden wells by county	T3
Table 4	Summary of Quaternary sand and gravel deposits	T4
Table 5	Selected gauging stations in southern Ontario, their periods of record, and drainage areas	T5
Table 6	Long-term means of monthly and annual ground water discharge/recharge at selected gauging stations in southern Ontario	T6
Table 7	Ground water quality in various bedrock hydrogeologic units	T7
Table 8	Ground water quality for wells completed in areas where various overburden deposits outcrop at surface	T11
Table 9	Bedrock ground water types	T15
Table 10	General characteristics of natural ground water quality encountered in bedrock and overburden wells in southern Ontario by various parameters	T16

LIST OF ILLUSTRATIONS

(VOLUME 2)

Figure 1 Location of the study area.

Figure 2 Map of southern Ontario showing the counties included in the study.

Figure 3 Physiographic regions in southern Ontario (from Thurston et al, 1992).

Figure 4 Major drainage basins in southern Ontario (from MNR, 1984).

Figure 5 Mean annual precipitation (a), snowfall (b), evapotranspiration (c), and runoff (d) in southern Ontario (from MNR, 1984).

Figure 6 Locations of bedrock wells in southern Ontario.

Figure 7 Bedrock elevation in southern Ontario.

Figure 8 Ranges of specific capacities for wells completed in Precambrian rocks.

Figure 9 Bedrock hydrogeologic units in eastern Ontario.

Figure 10 Ranges of specific capacities for wells completed in the Nepean-March-Oxford Hydrogeologic Unit.

Figure 11 Ranges of specific capacities for wells completed in the Simcoe Group Hydrogeologic Unit.

Figure 12 Ranges of specific capacities for wells completed in Blue Mountain-Georgian Bay and Queenston hydrogeologic units.

Figure 13 Ranges of specific capacity values for wells completed in the Amabel-Lockport-Guelph, Salina and Bass Island hydrogeologic units.

Figure 14 Ranges of specific capacity values for wells completed in the Bois Blanc, Detroit River Group, Dundee, Hamilton Group and Kettle Point hydrogeologic units.

Figure 15 Water-yielding capabilities of bedrock hydrogeologic units in southern Ontario.

Figure 16 Correlation chart for southwestern Ontario (from Thurston et al, 1992).

Figure 17 Locations of overburden wells in southern Ontario.

Figure 18 Overburden thickness in southern Ontario.

Figure 19 Areas where sand and gravel deposits outcrop at surface in southern Ontario.

Figure 20 Ground water level within the bedrock in southern Ontario.

Figure 21 Ground water level within the overburden in southern Ontario.

Figure 22 Hydrographs of water level fluctuations in observation well W-5A (piezometers a and b) during water year 1971-1972 (from Singer, 1974).

Figure 23 Static water level in well 1B during 1972 in the Blue Springs Creek watershed (from Coward and Barouch, 1978).

Figure 24 Bedrock wells with natural water quality problems.

Figure 25 Percentage of samples exceeding the PDWO for sodium (200 mg/l).

Figure 26 Percentage of samples exceeding the PDWO for iron (0.3 mg/l).

Figure 27 Percentage of samples exceeding the PDWO total dissolved solids (500 mg/l).

Figure 28 Percentage of samples exceeding the PDWO for chloride (250 mg/l).

Figure 29 Percentage of samples exceeding the PDWO for sulphate (250 mg/l).

Figure 30 Minimum, mean and maximum levels of hardness for various bedrock hydrogeologic units.

Figure 31 Overburden wells with natural water quality problems.

(VOLUME 3, Appendix II)

Figure A1 Transmissivity-probability graph for wells completed in Precambrian rocks.

Figure A2 Transmissivity-probability graph for wells completed in the Nepean-March-Oxford hydrogeologic unit.

Figure A3 Transmissivity-probability graph for wells completed in the Rockcliffe hydrogeologic unit.

Figure A4 Transmissivity-probability graph for wells completed in the Ottawa Group hydrogeologic unit.

Figure A5 Transmissivity-probability graph for wells completed in the Simcoe Group hydrogeologic unit.

Figure A6 Transmissivity-probability graph for wells completed in the Billings-Carlsbad-Queenston hydrogeologic unit.

Figure A7 Transmissivity-probability graph for wells completed in the Blue Mountain-Georgian Bay hydrogeologic unit.

Figure A8 Transmissivity-probability graph for wells completed in the Queenston hydrogeologic unit in central Ontario.

Figure A9 Transmissivity-probability graphs for wells completed in the Amabel, Lockport and Guelph Formations.

Figure A10 Transmissivity-probability graphs for wells completed in the Salina and Bass Island hydrogeologic units.

Figure A11 Transmissivity-probability graph for wells completed in the Bois Blanc hydrogeologic unit.

Figure A12 Transmissivity-probability graphs for wells completed in the Detroit River Group, Dundee and Hamilton Group hydrogeologic units.

Figure A13 Transmissivity-probability graph for wells completed in the Kettle Point hydrogeologic unit.

Figure A14 Specific capacity-probability graphs for wells completed in glaciofluvial deposits.

Figure A15 Specific capacity-probability graphs for wells completed in sands and gravels of glaciolacustrine, glaciomarine and marine origin.

FIGURES

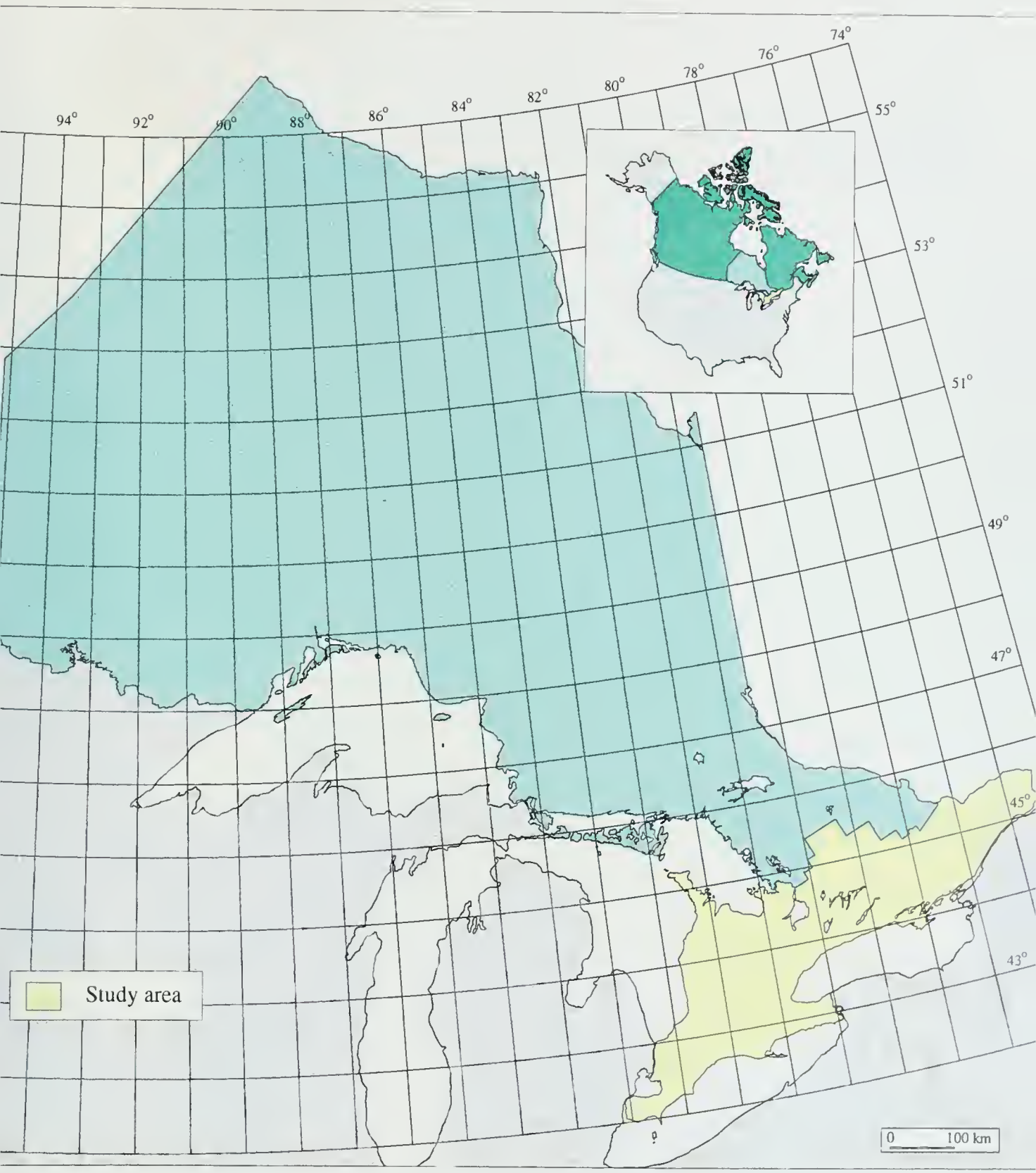


Figure 1. Location of the study area relative to other parts of Ontario.

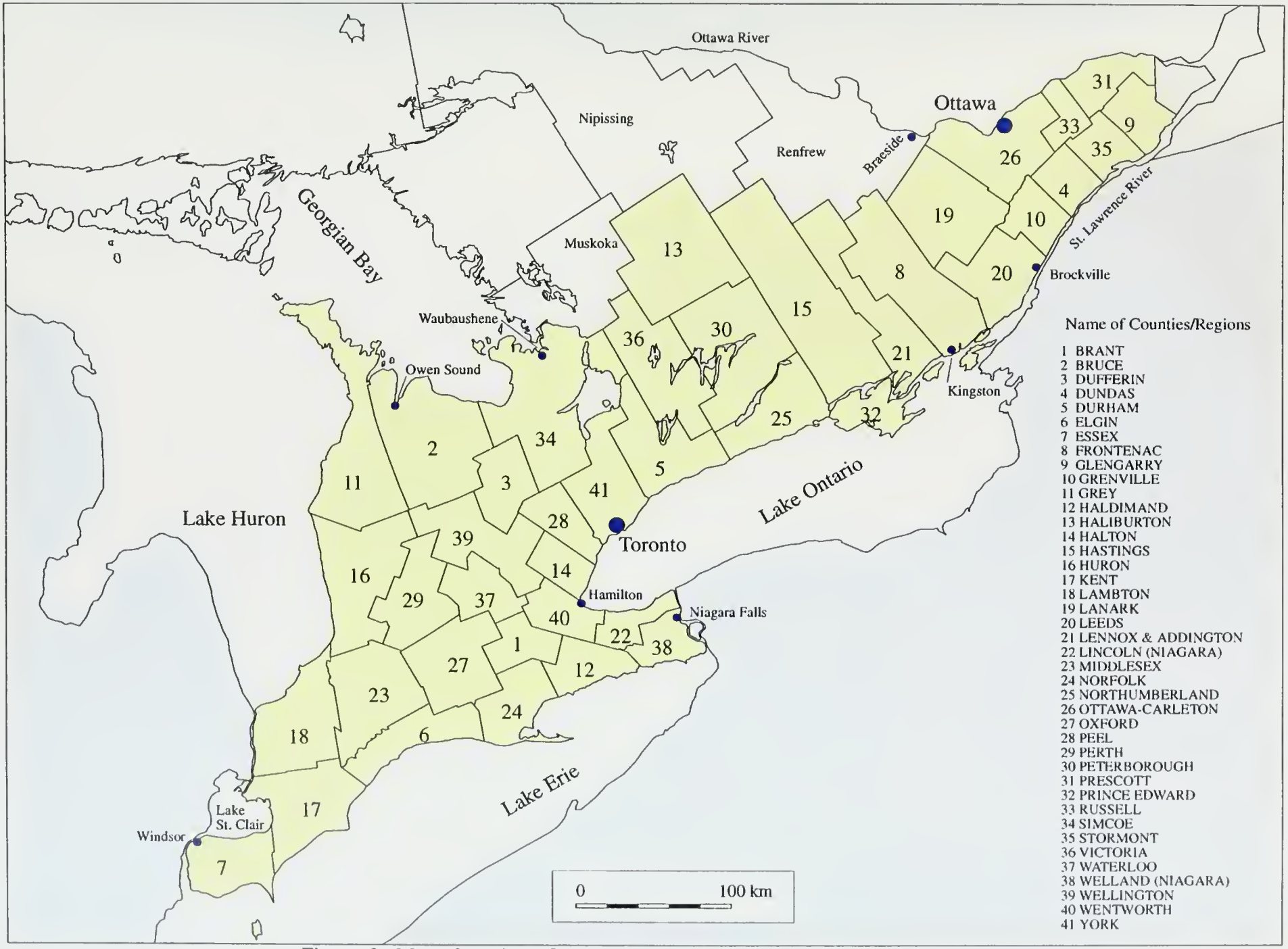


Figure 2. Map of southern Ontario showing the counties included in the study.

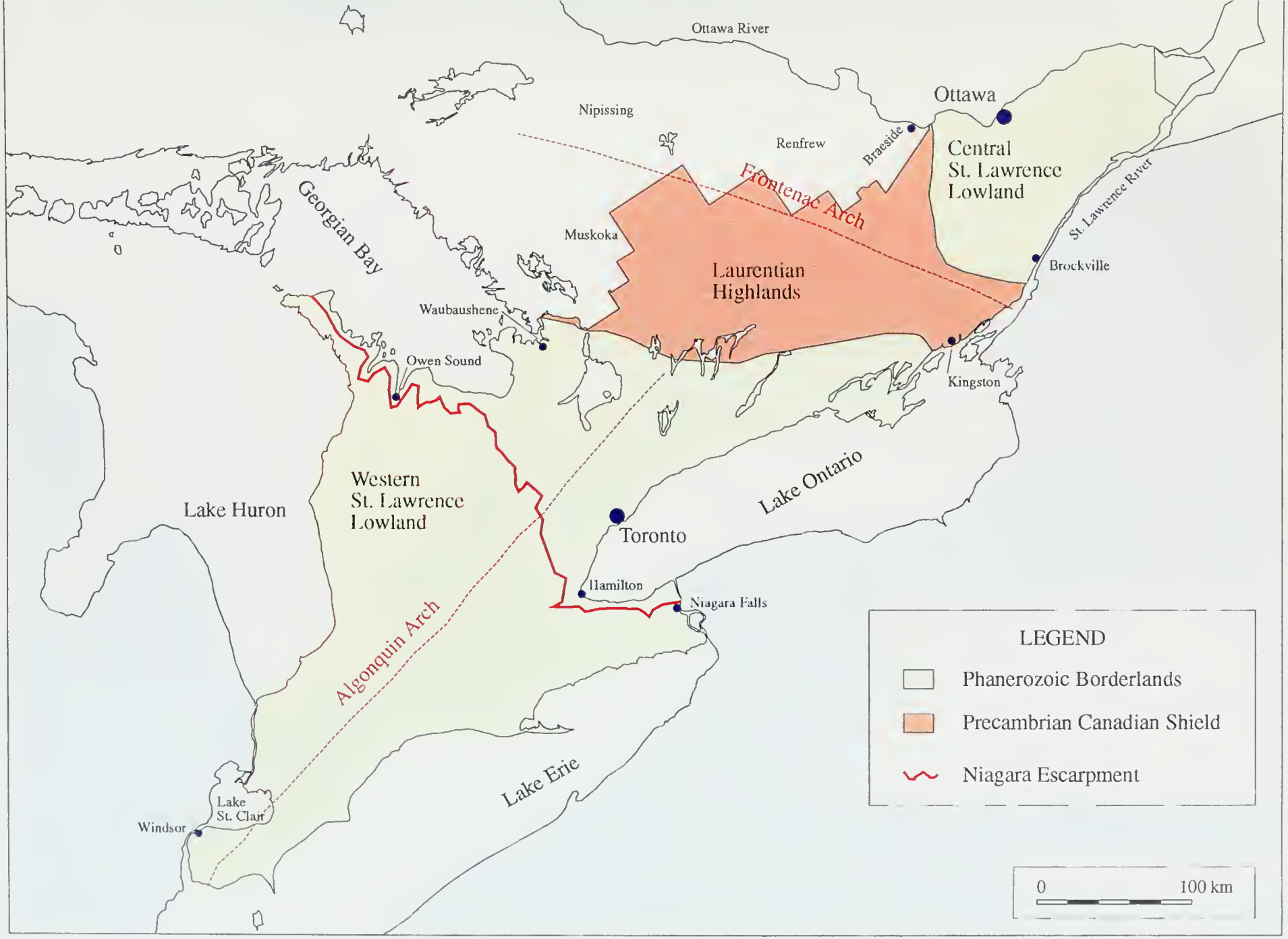


Figure 3. Physiographic regions in southern Ontario (from Thurston et al. 1992)

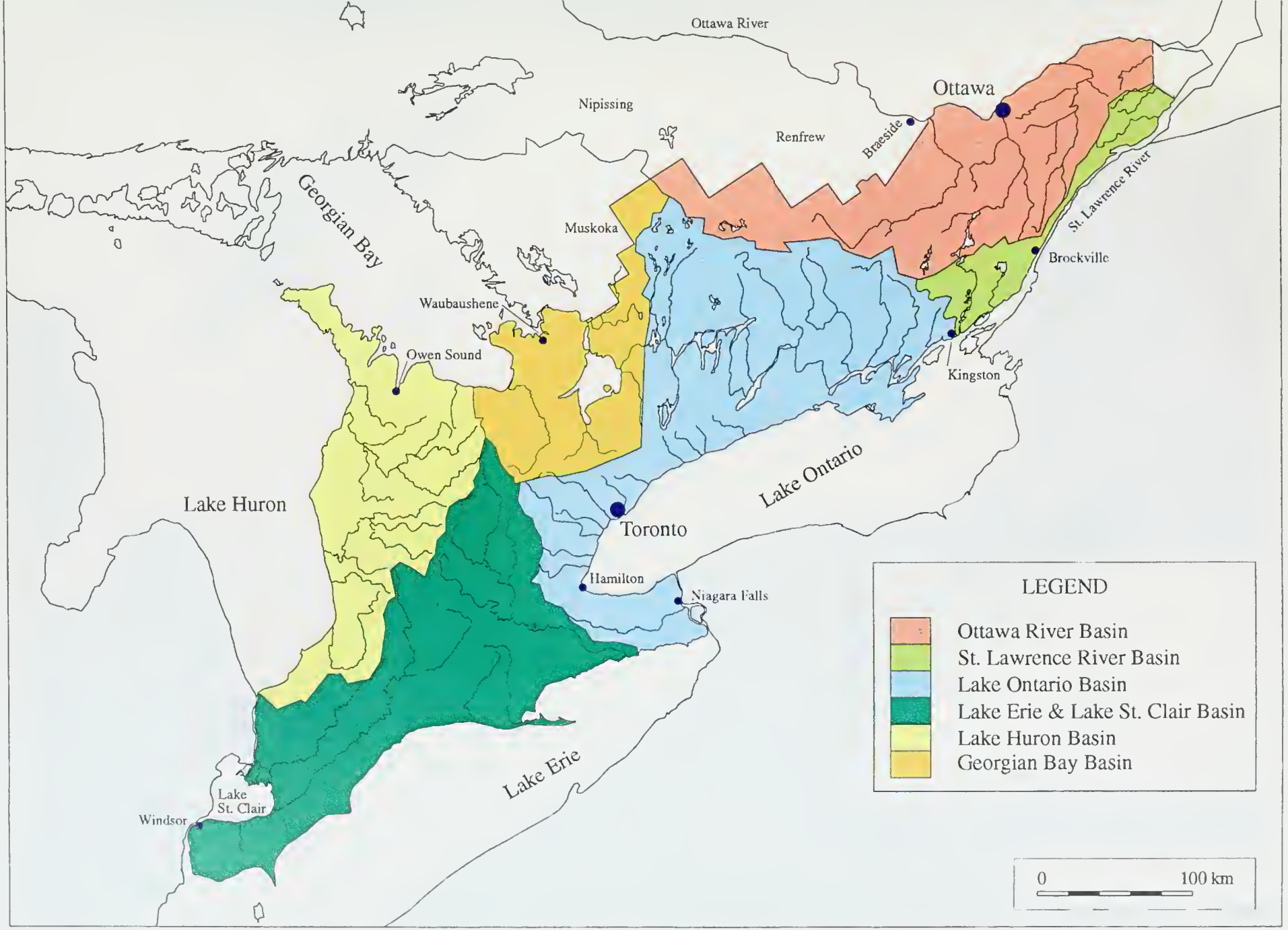
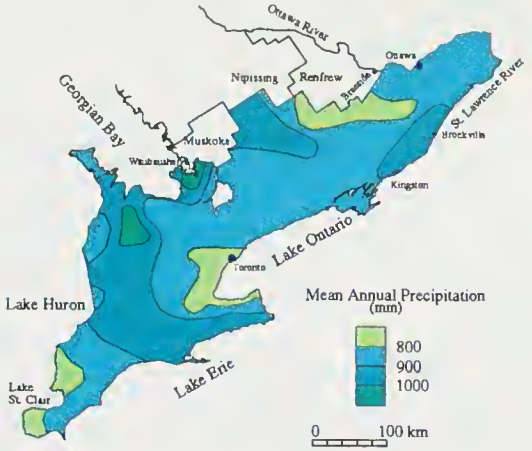


Figure 4. Major drainage basins in southern Ontario (from MNR, 1984).



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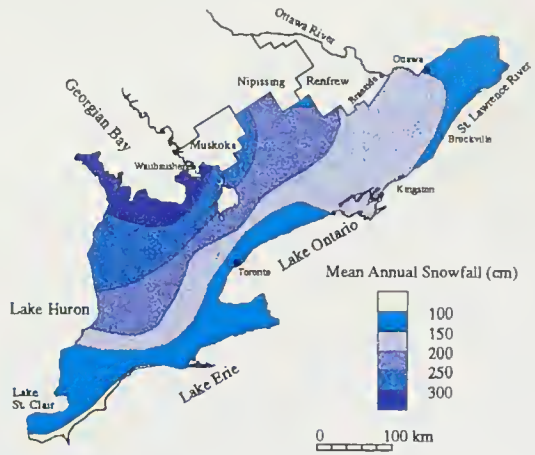

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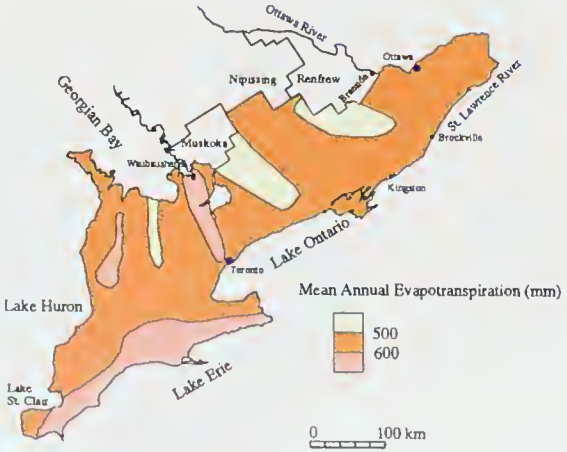

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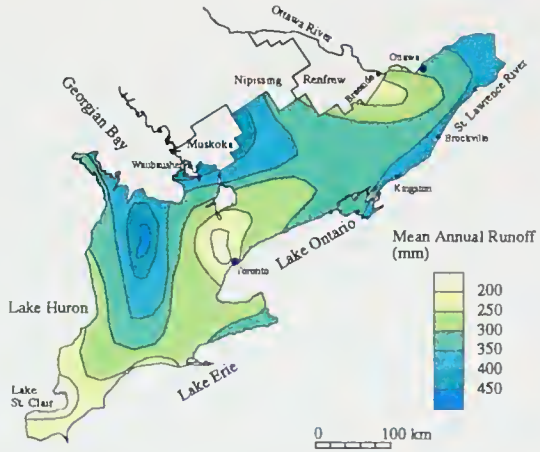

(d)

Figure 5. Mean annual precipitation (a), snowfall (b), evapotranspiration (c) and ranoff (d) in southern Ontario (from MNR, 1984).

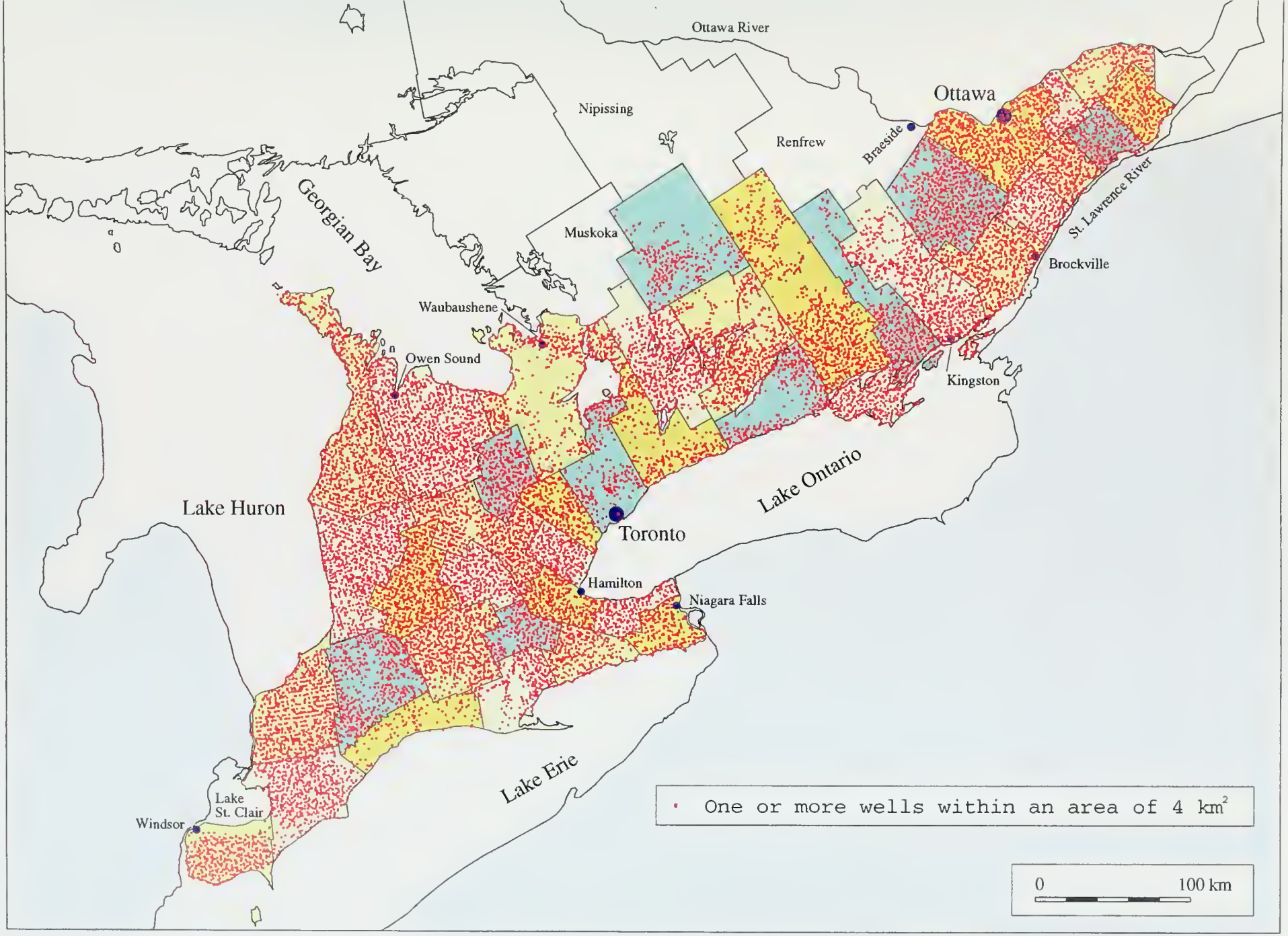

Figure 6. Locations of bedrock wells in southern Ontario.

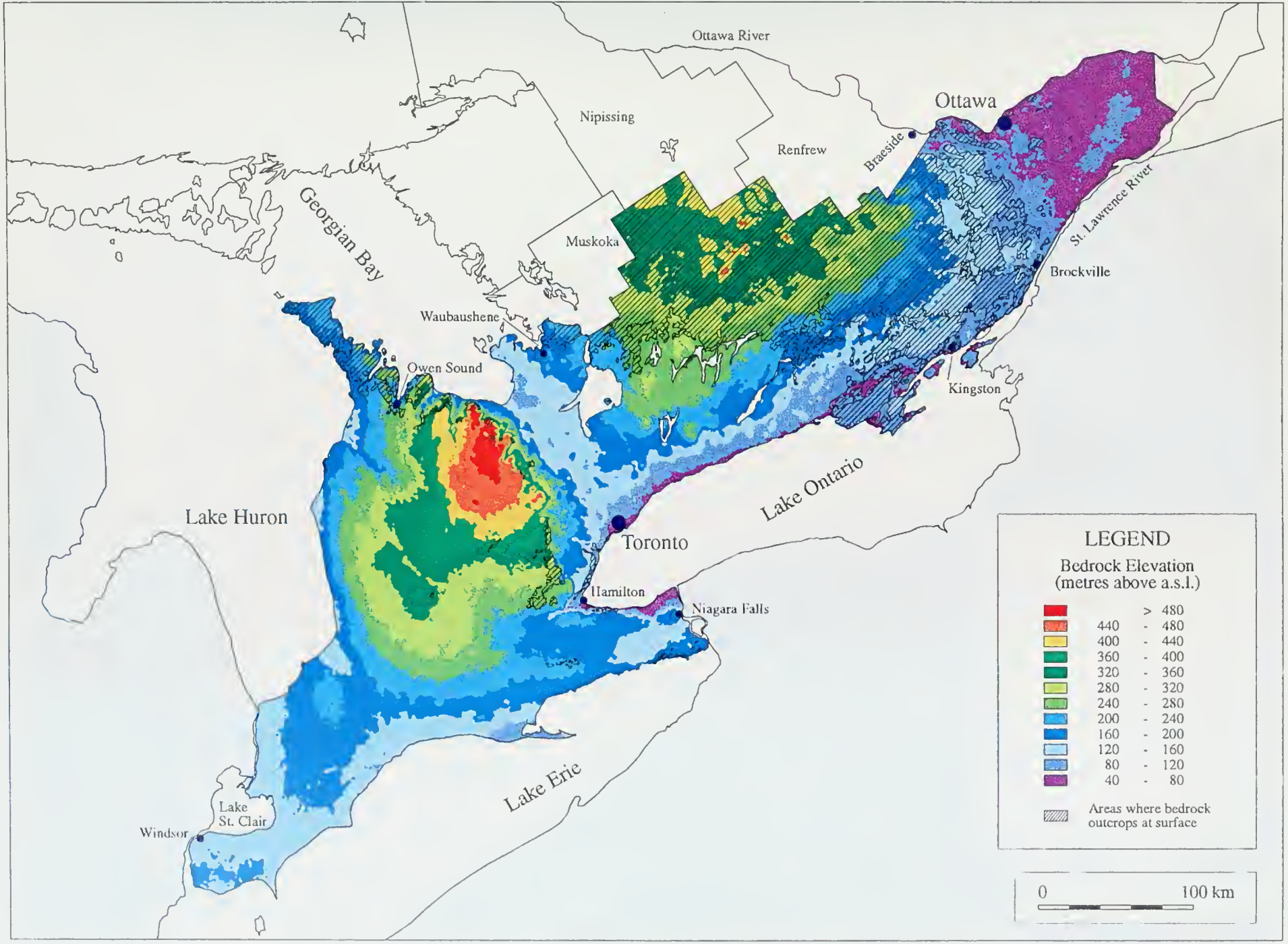

Figure 7. Bedrock elevation in southern Ontario.

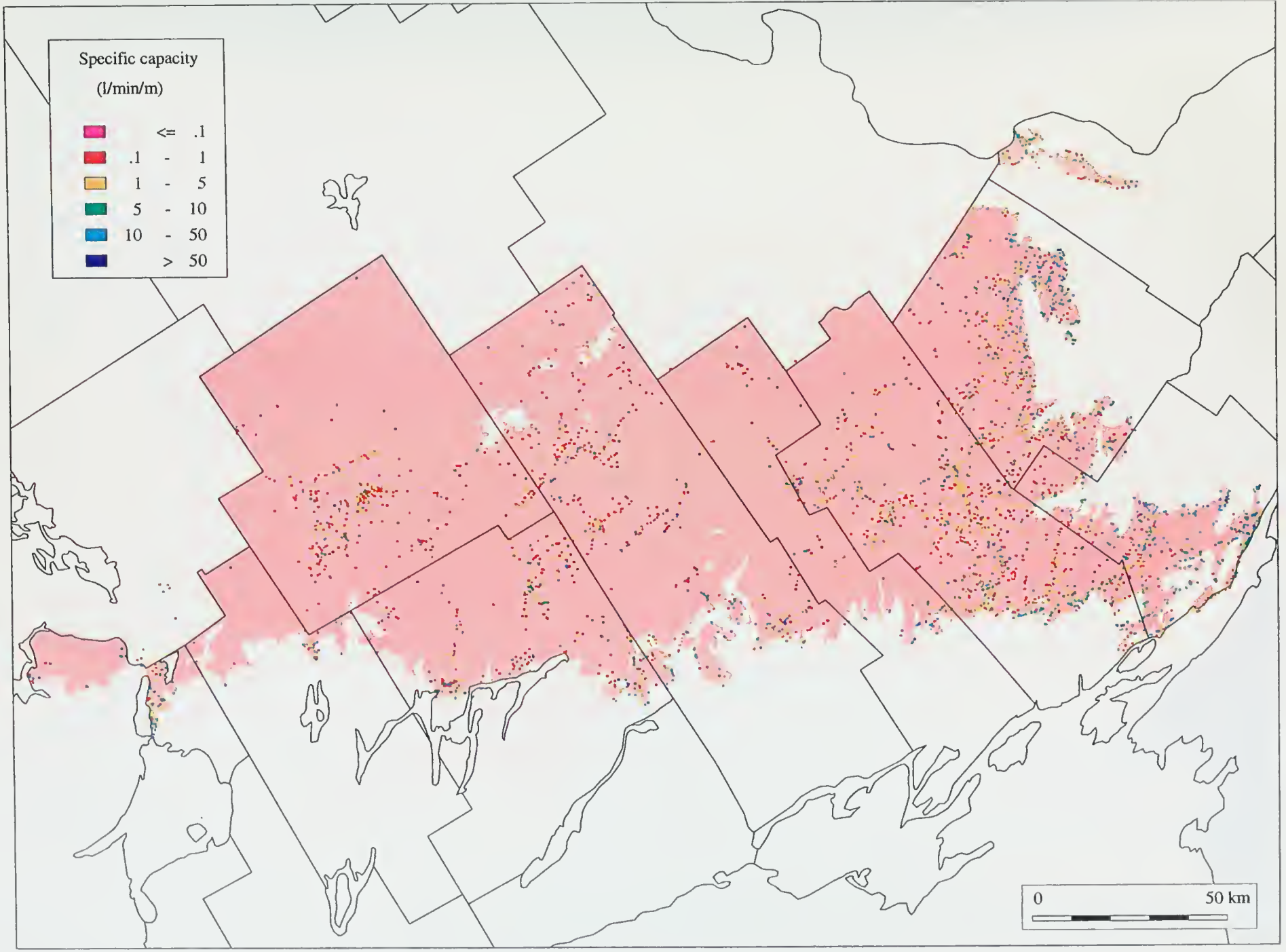

Figure 8. Ranges of specific capacities for wells completed in Precambrain rocks.

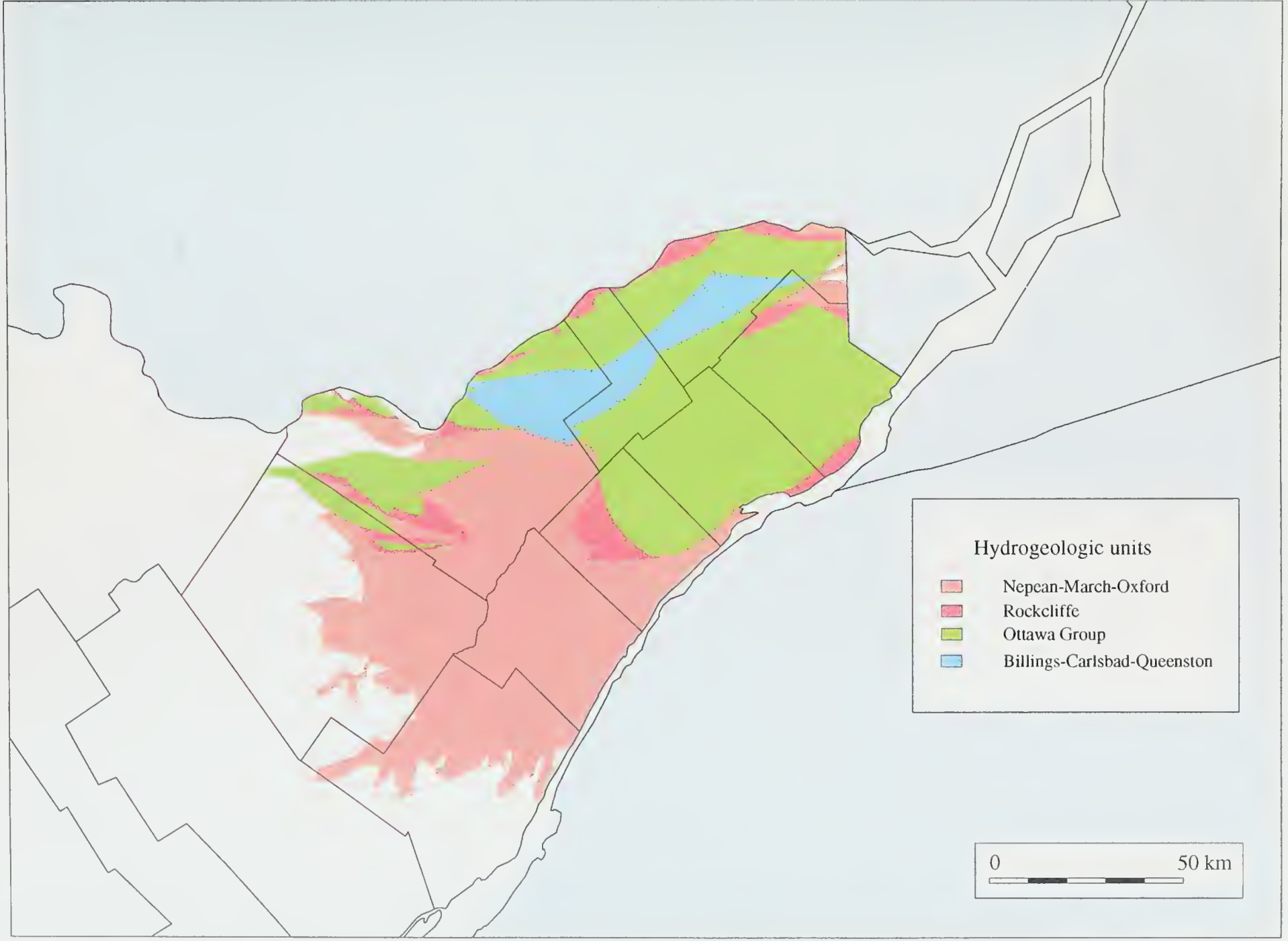

Figure 9. Bedrock hydrogeologic units in eastern Ontario.

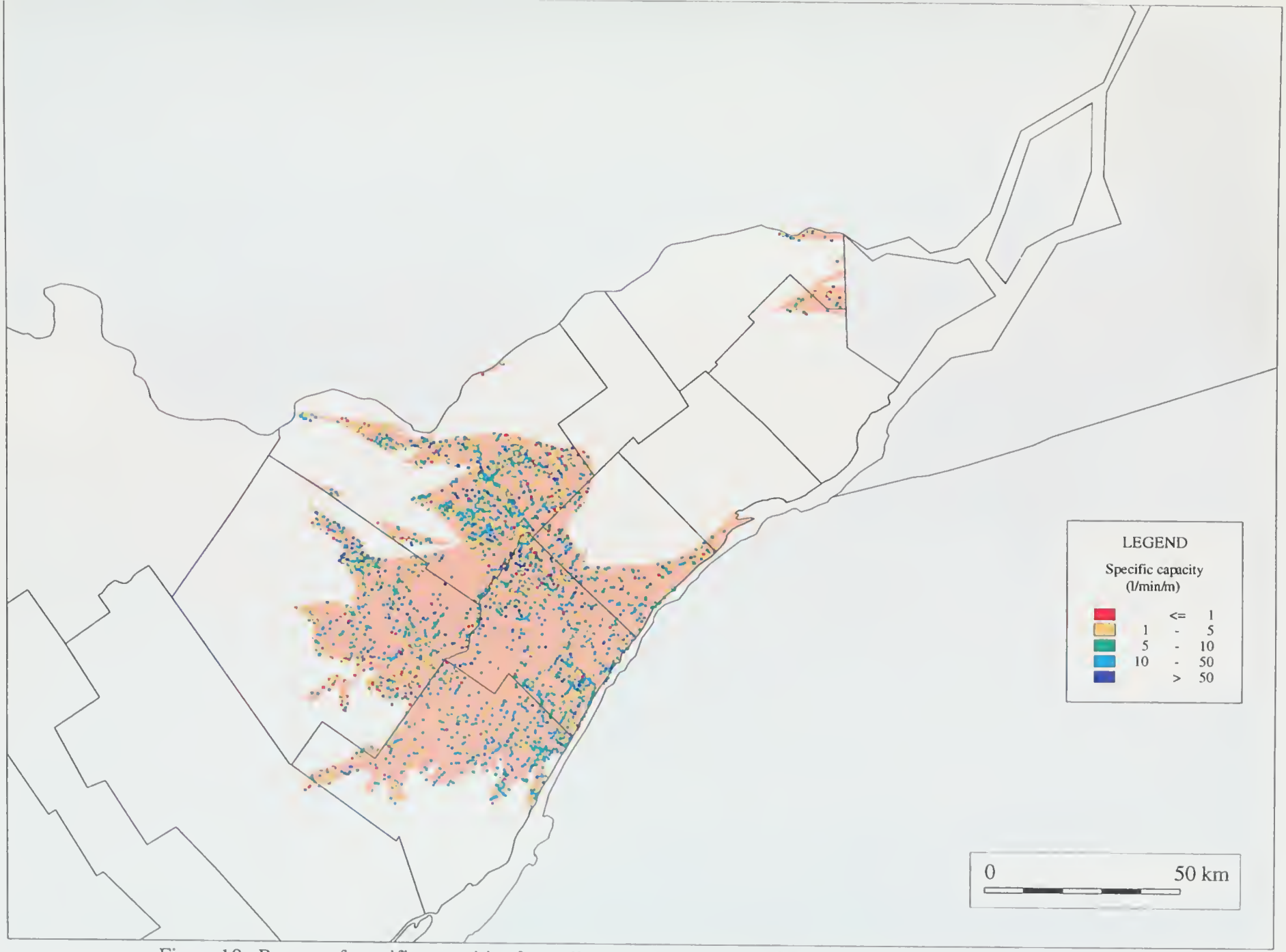

Figure 10. Ranges of specific capacities for wells completed in the Nepean-March-Oxford Hydrogeologic unit.

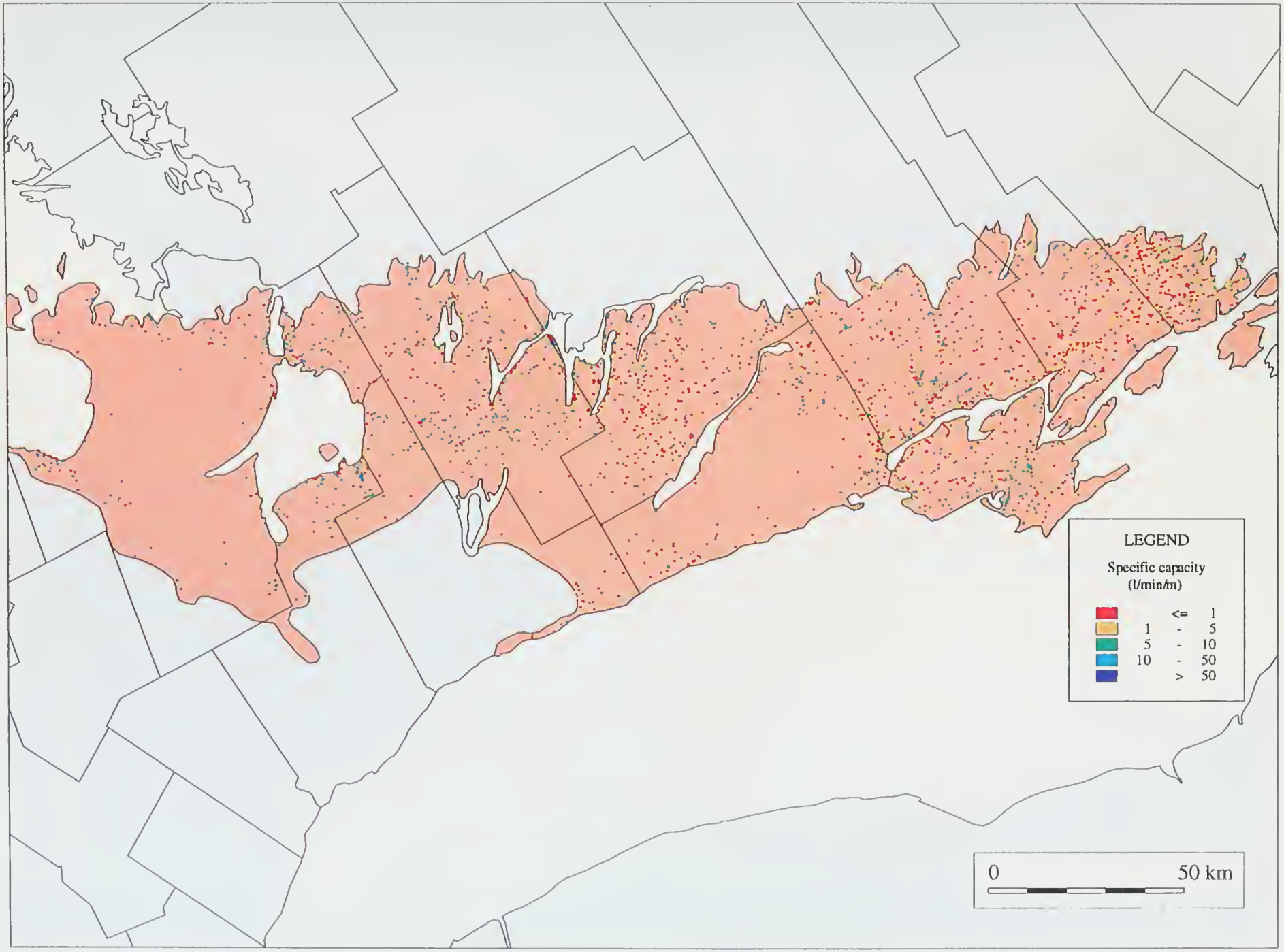

Figure 11. Ranges of specific capacities for wells completed in the Simcoe Group hydrogeologic unit.

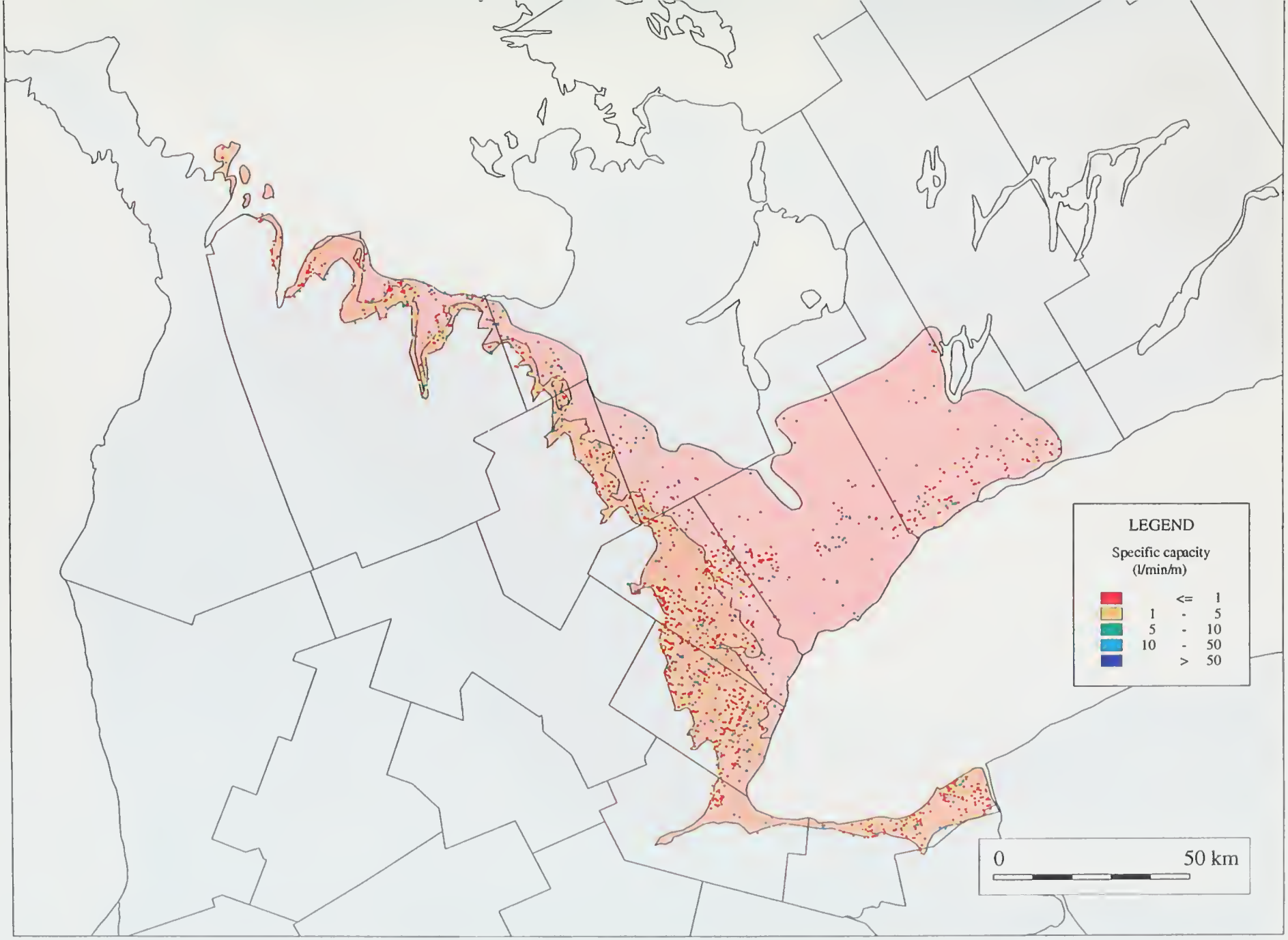

Figure 12. Ranges of specific capacities for wells completed in Blue Mountain-Georgian Bay and Queenston hydrogeologic units.

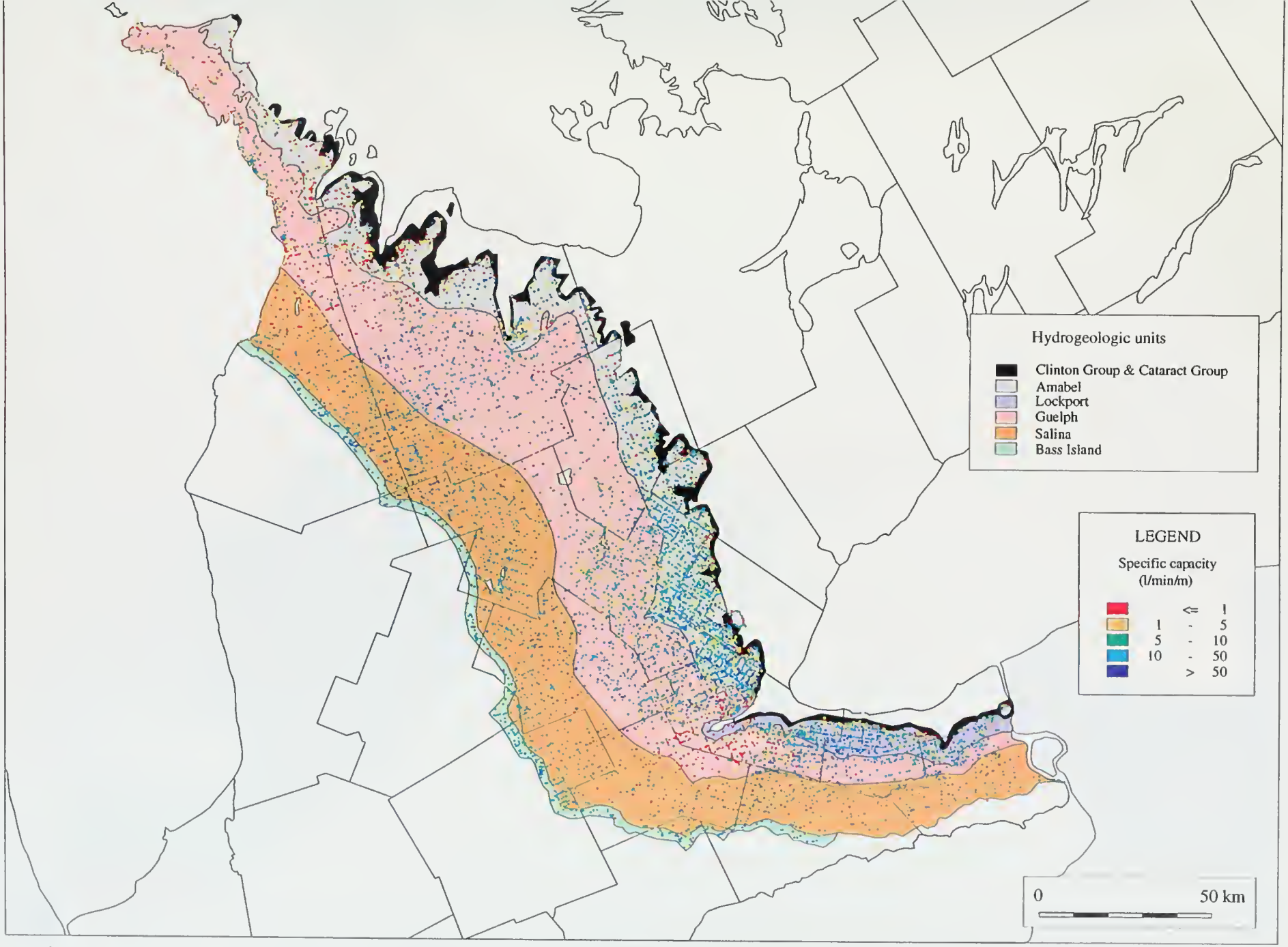

Figure 13. Ranges of specific capacities for wells completed in the Amabel-Lockport-Guelph, Salina and Bass Island hydrogeologic units.

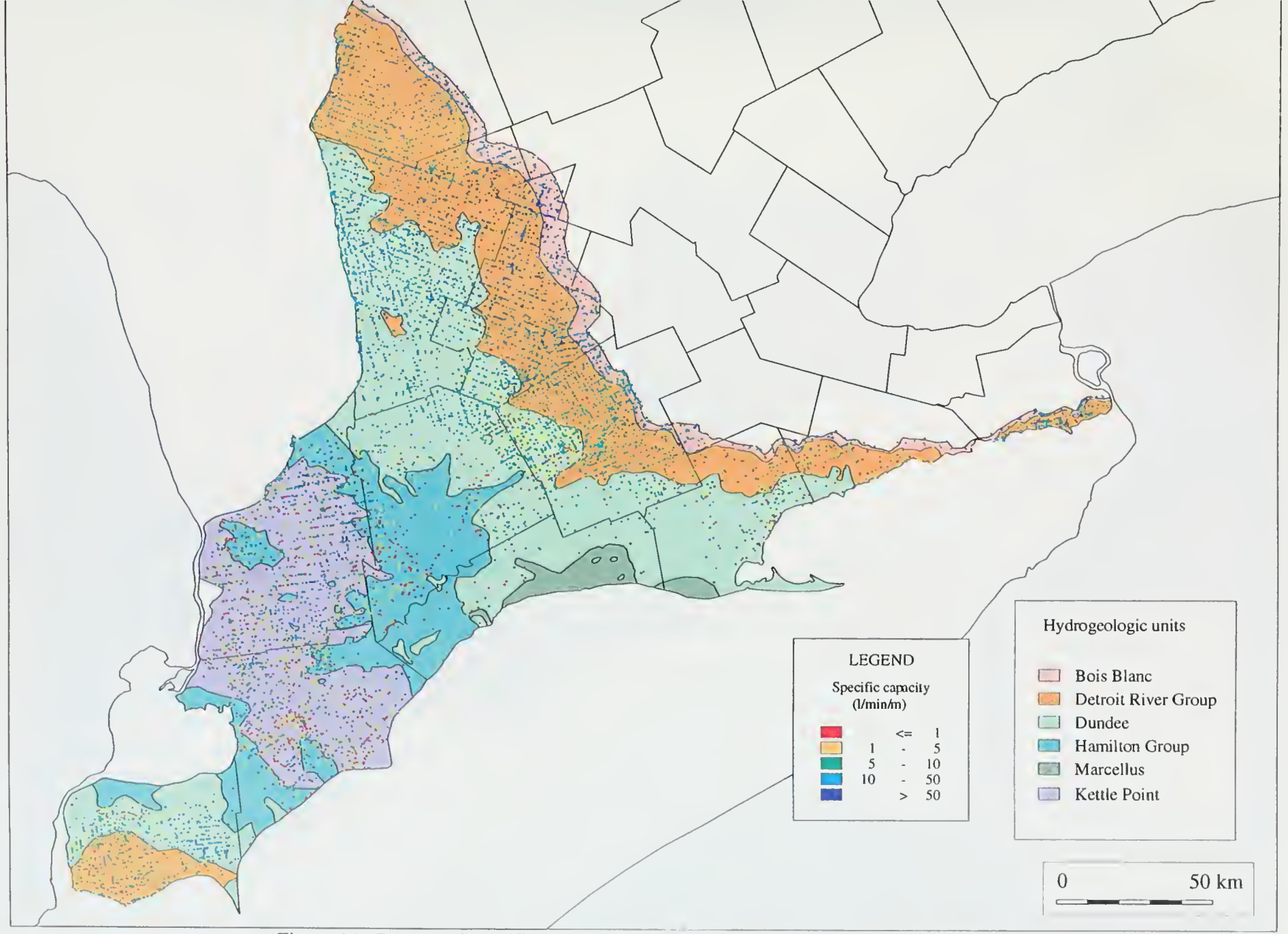

Figure 14. Ranges of specific capacity values for wells completed in the Bois Blanc, Detroit River Group, Dundee, Hamilton Group and Kettle Point hydrogeologic units.

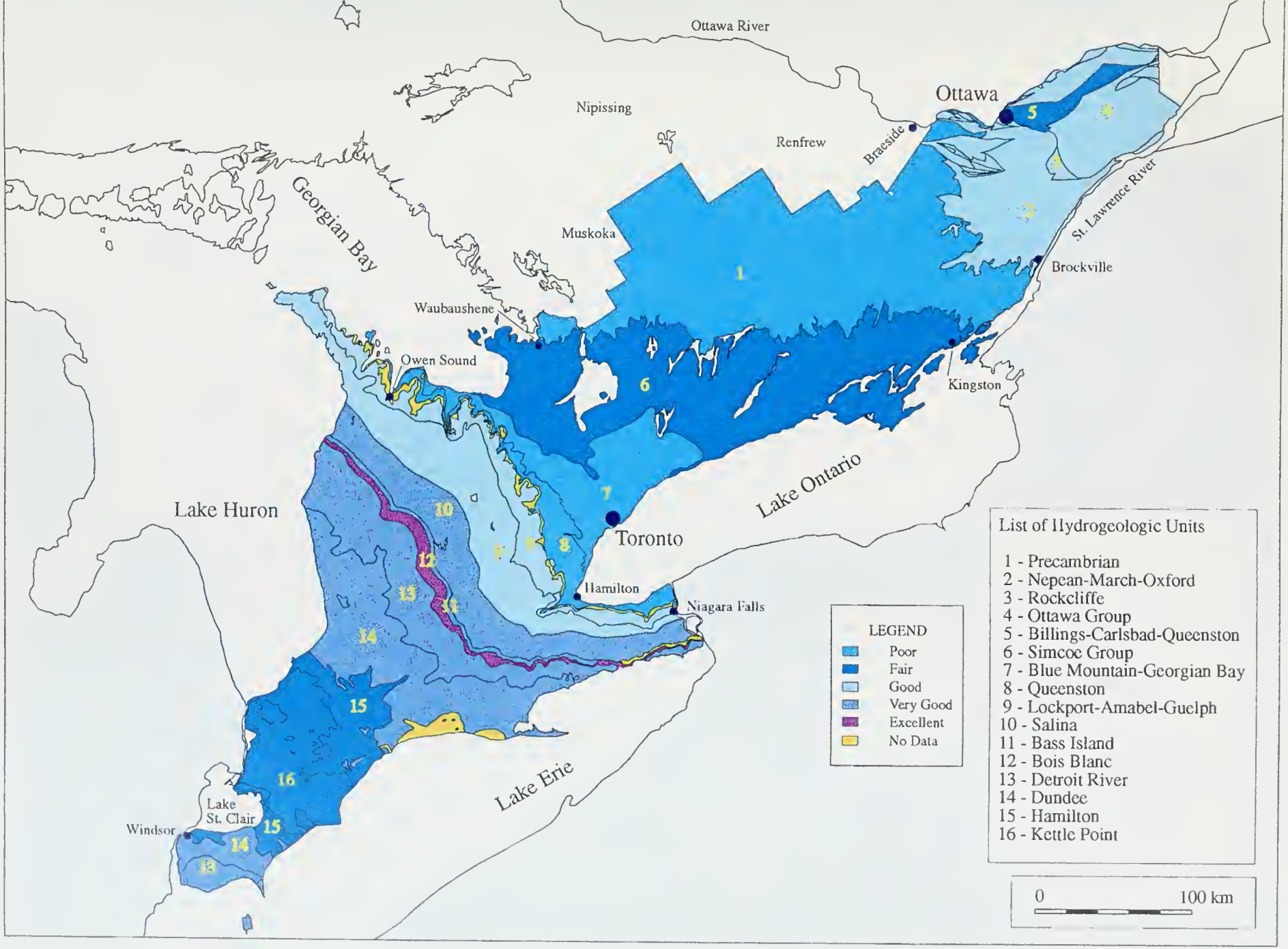

Figure 15. Water-yielding capabilities of bedrock hydrogeologic units in southern Ontario.

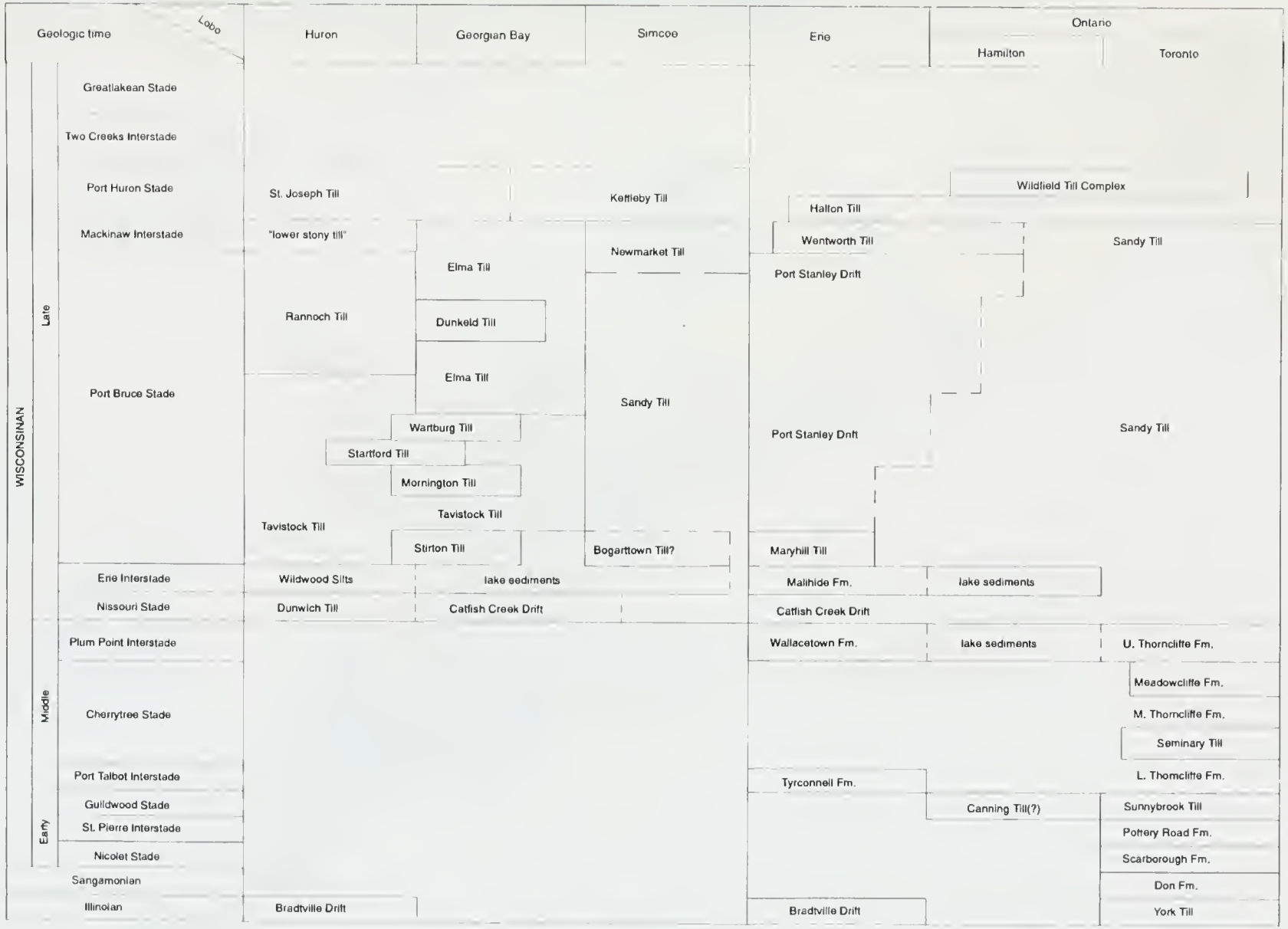

Figure 16. Correlation chart for southwestern Ontario (from Thurston et al, 1992).

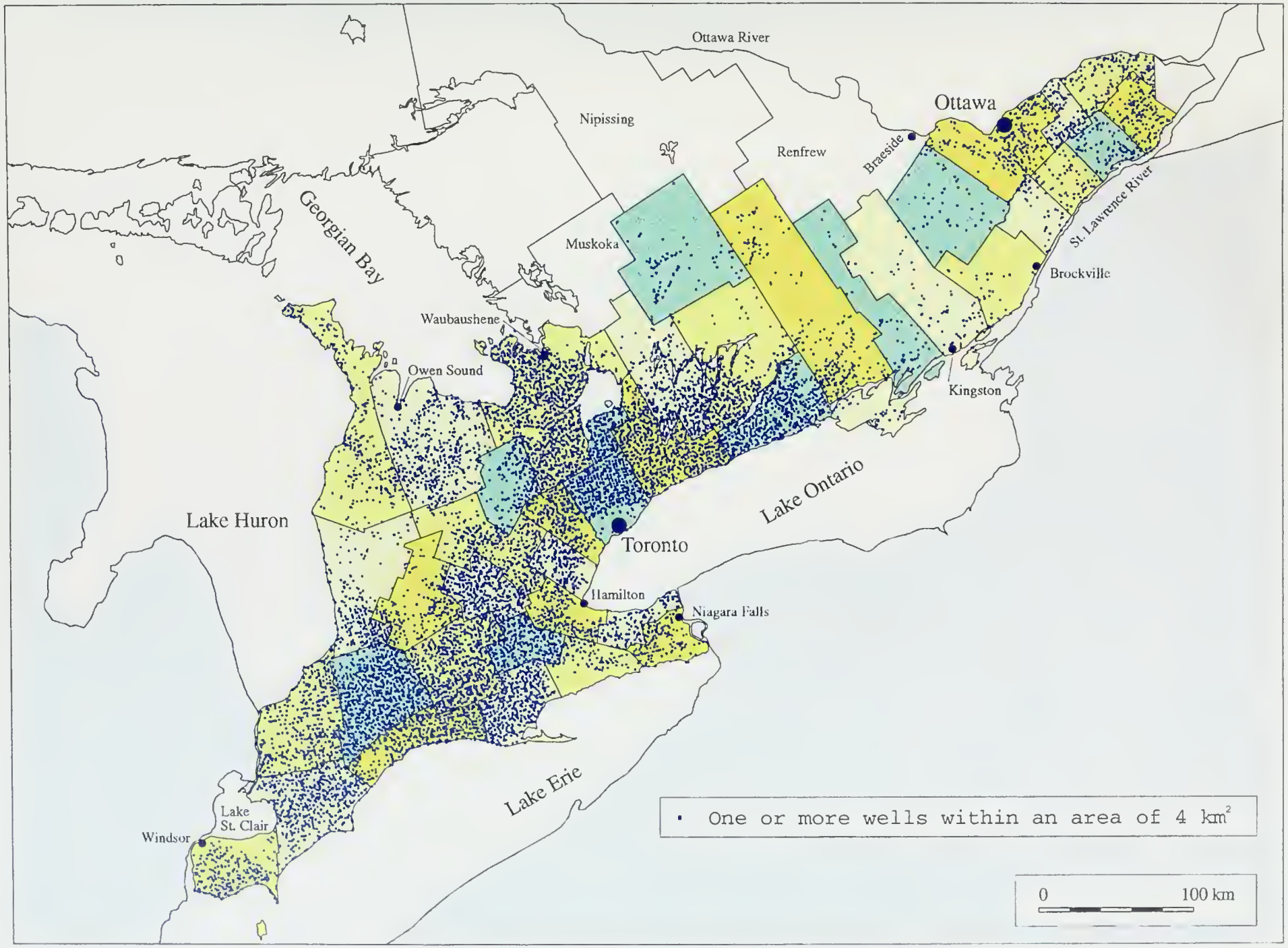

Figure 17. Locations of overburden wells in southern Ontario.

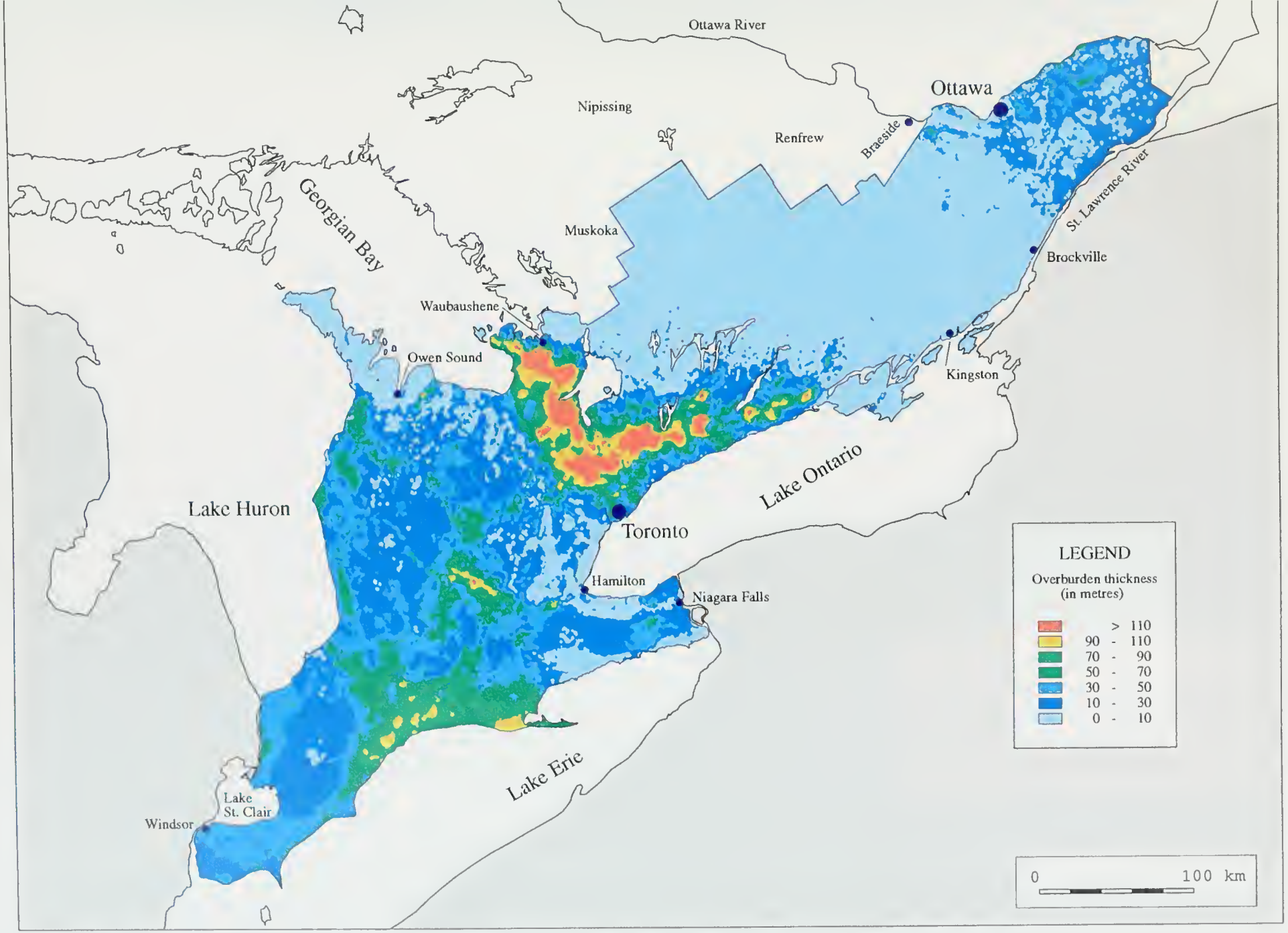

Figure 18. Overburden thickness in southern Ontario.

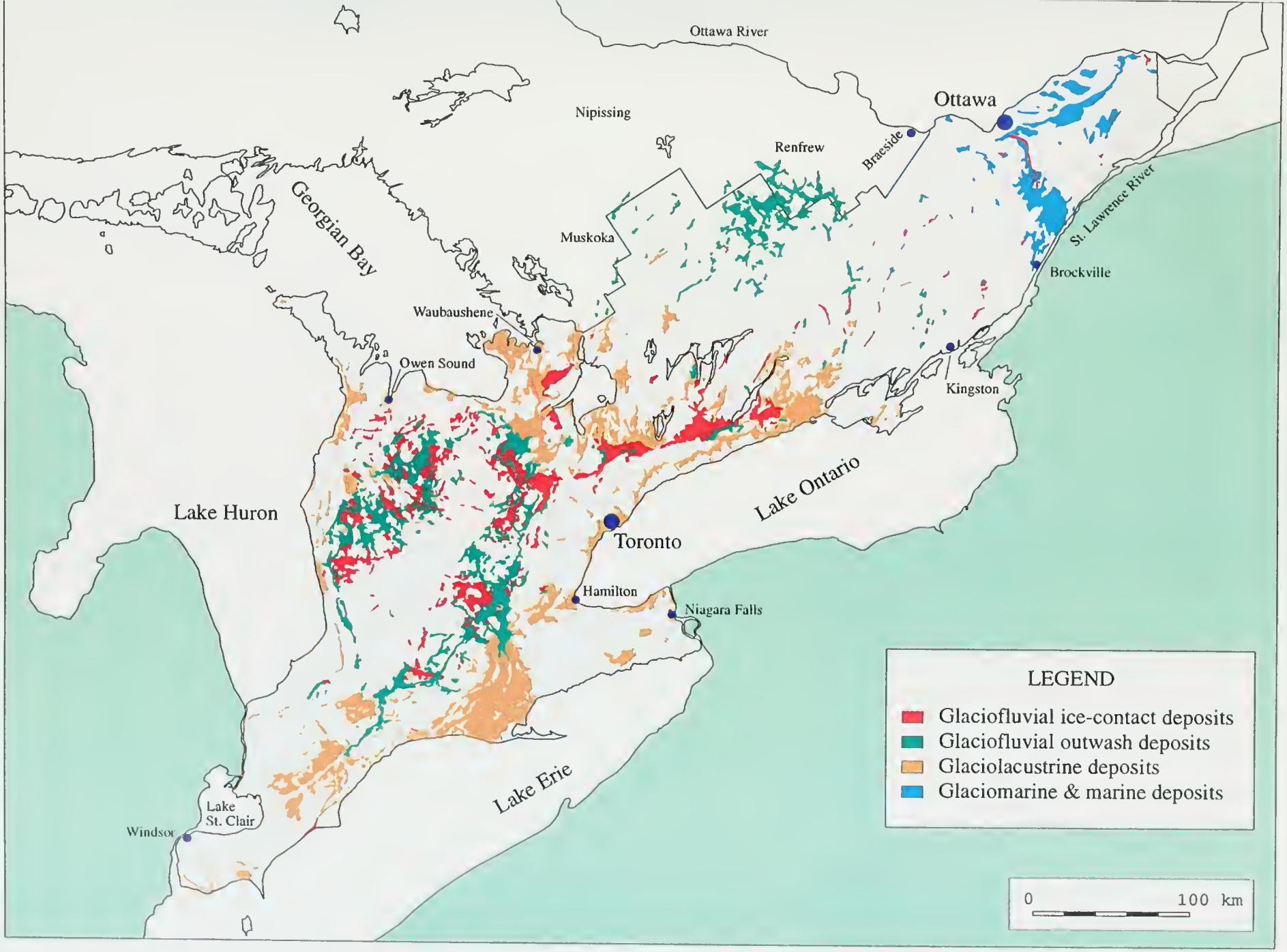

Figure 19. Areas where sand and gravel deposits outcrop at surface in southern Ontario.

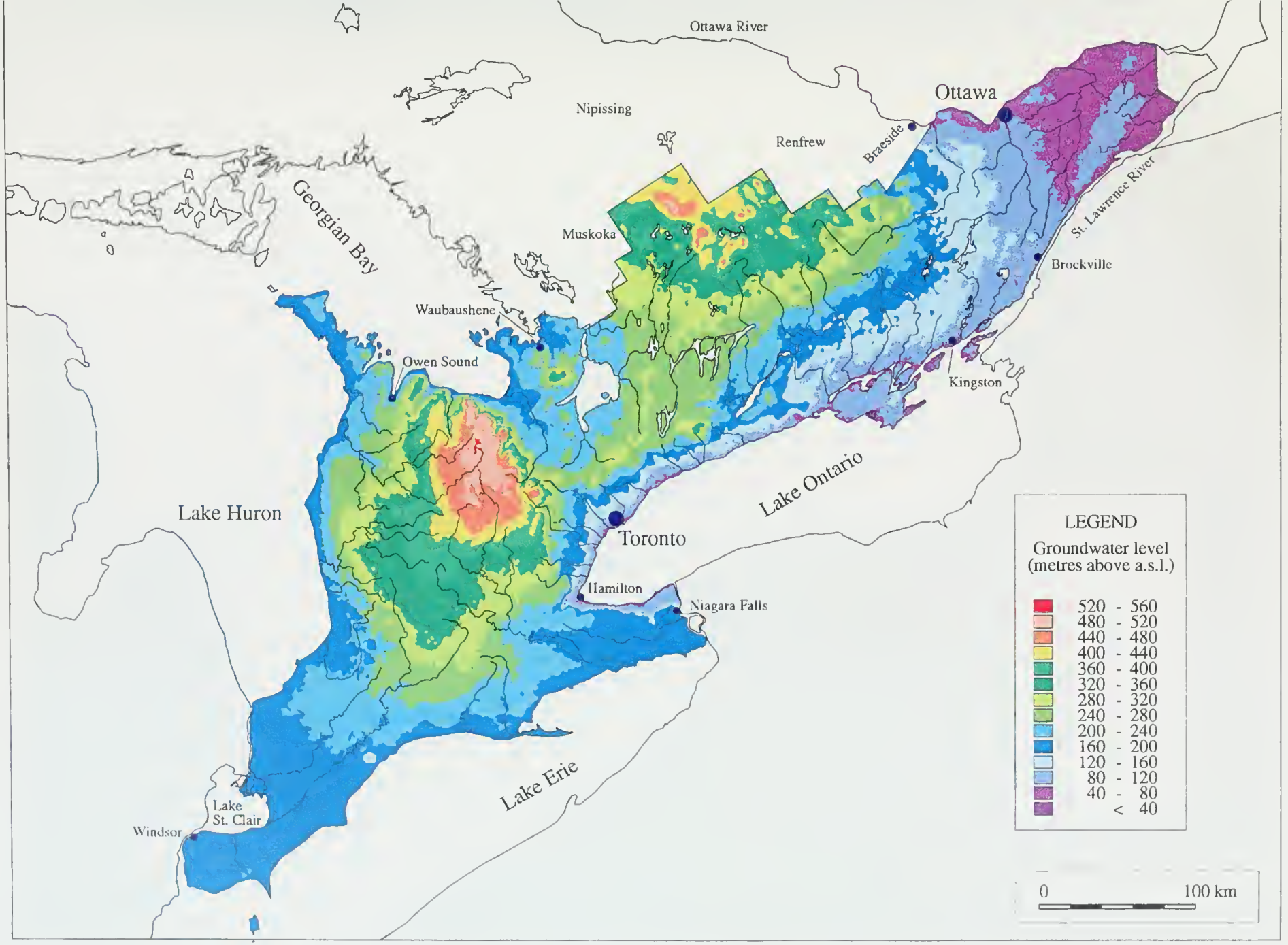

Figure 20. Groundwater level within the bedrock in southern Ontario.

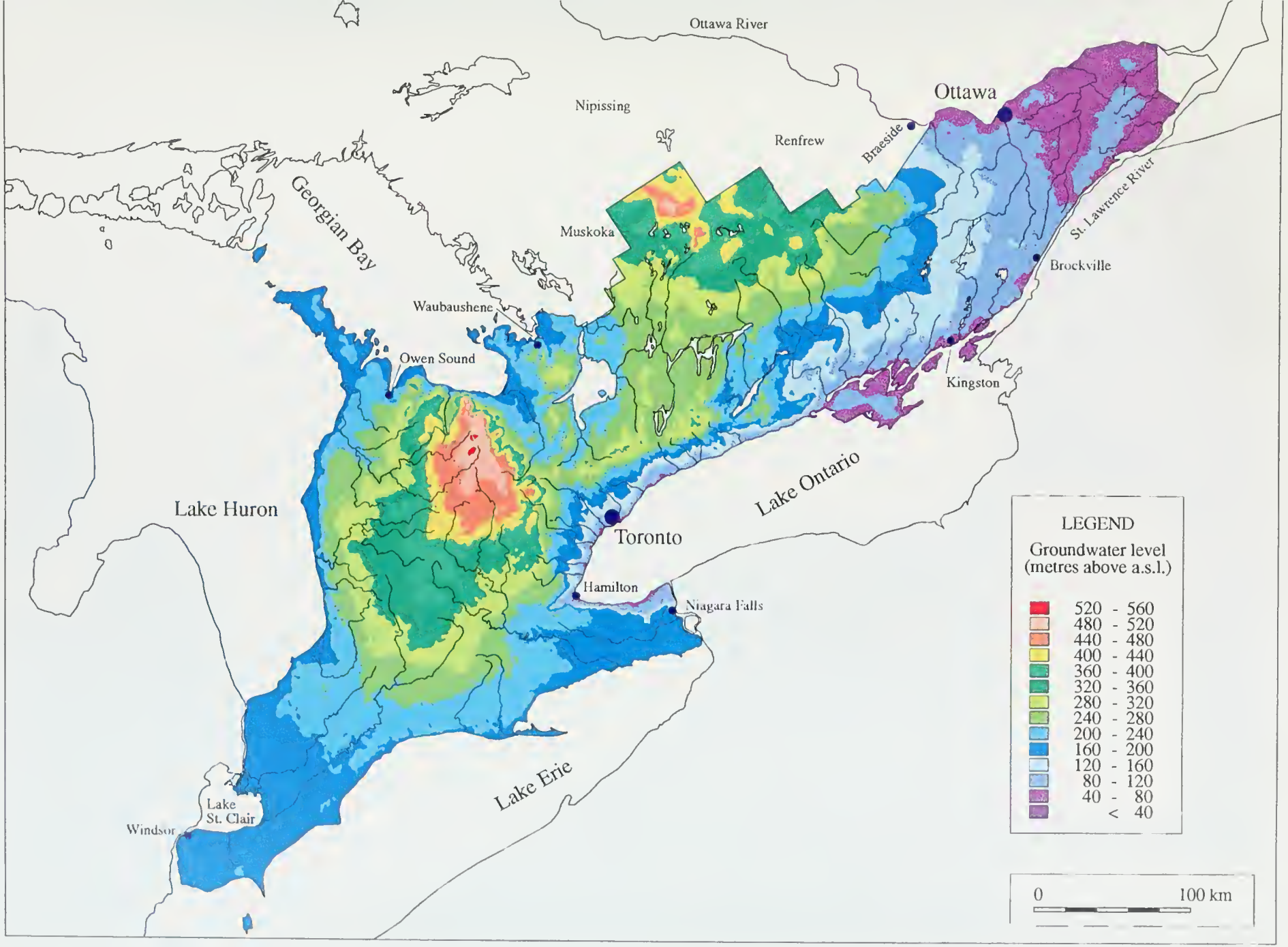

Figure 21. Groundwater level within the overburden in southern Ontario.

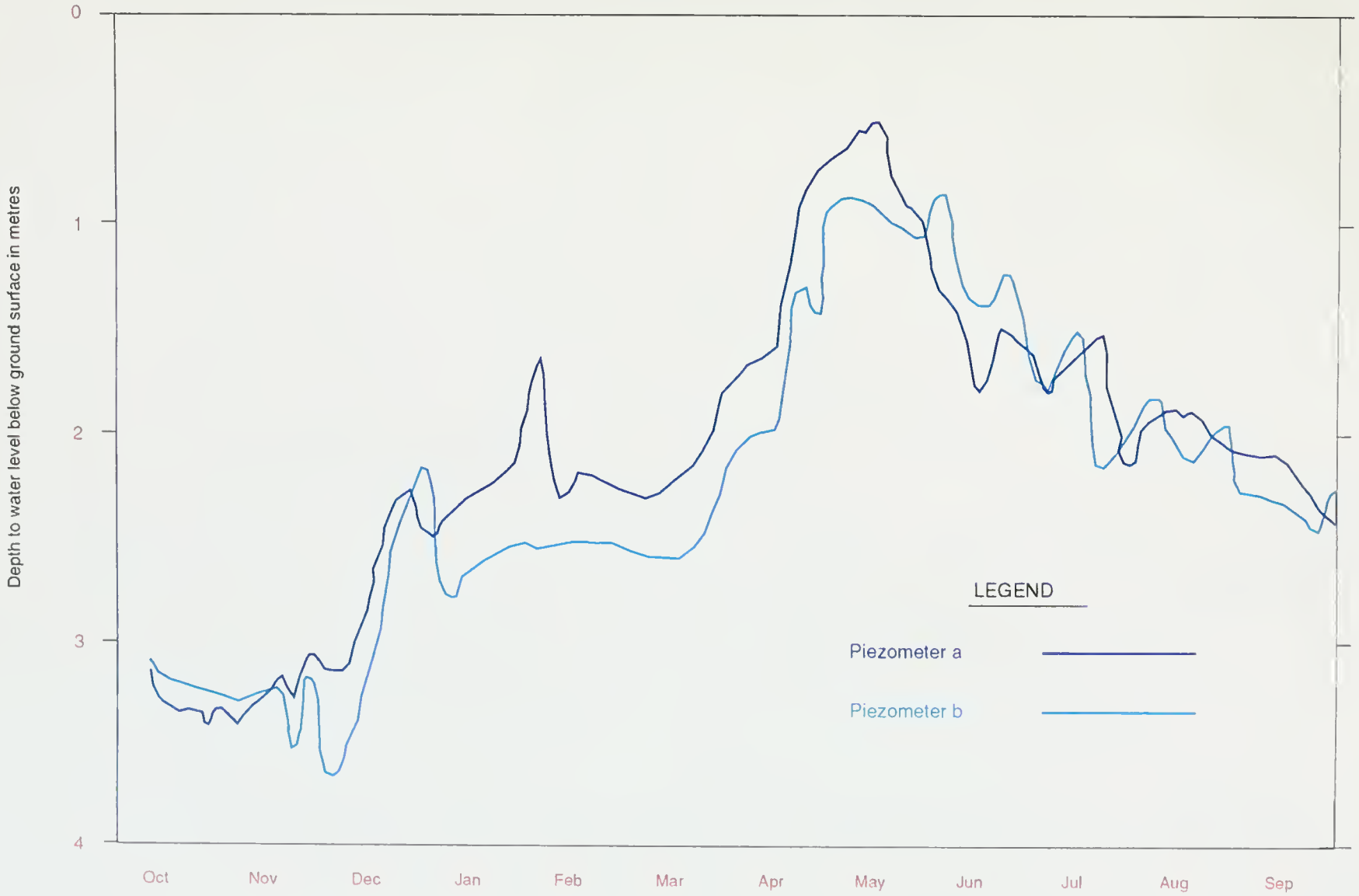

Figure 22. Hydrographs of water level fluctuations in observation well W-5A (piezometers a and b) during water year 1971-1972 (from Singer, 1974).

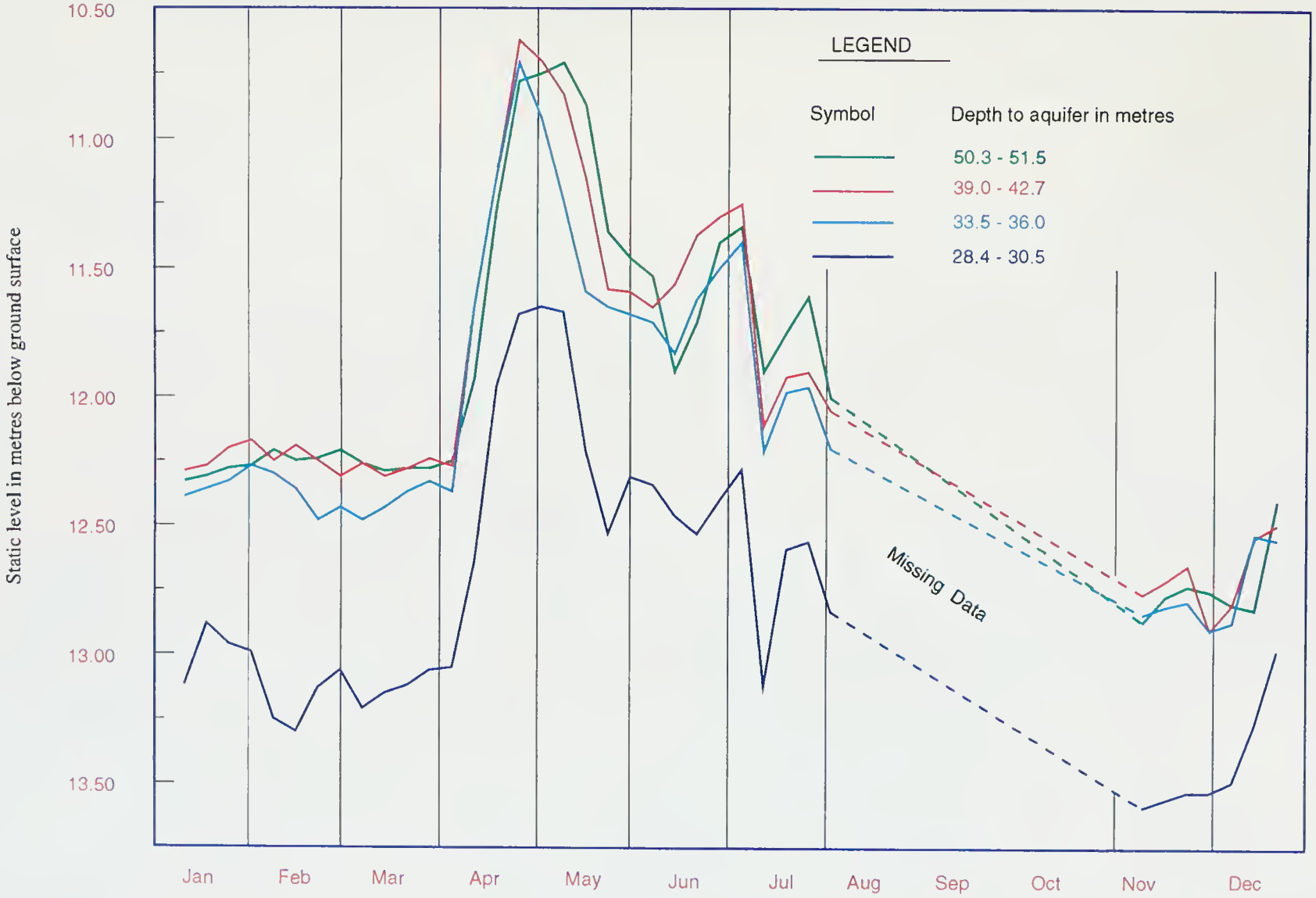

Figure 23. Static water level in well 1B during 1972 in the Blue Springs Creek watershed (from Cowan and Barouch, 1978).

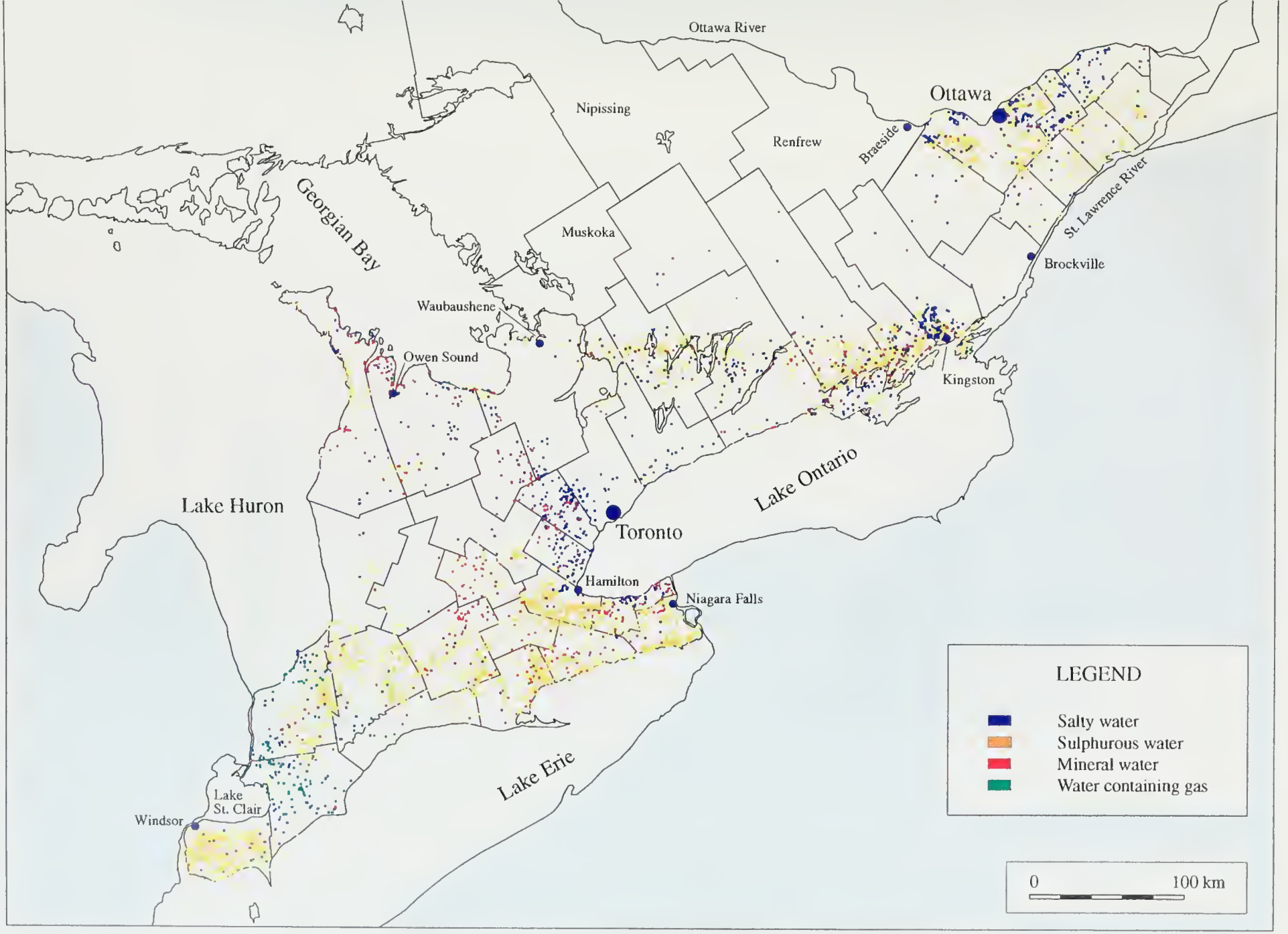

Figure 24. Bedrock wells with natural water quality problems.

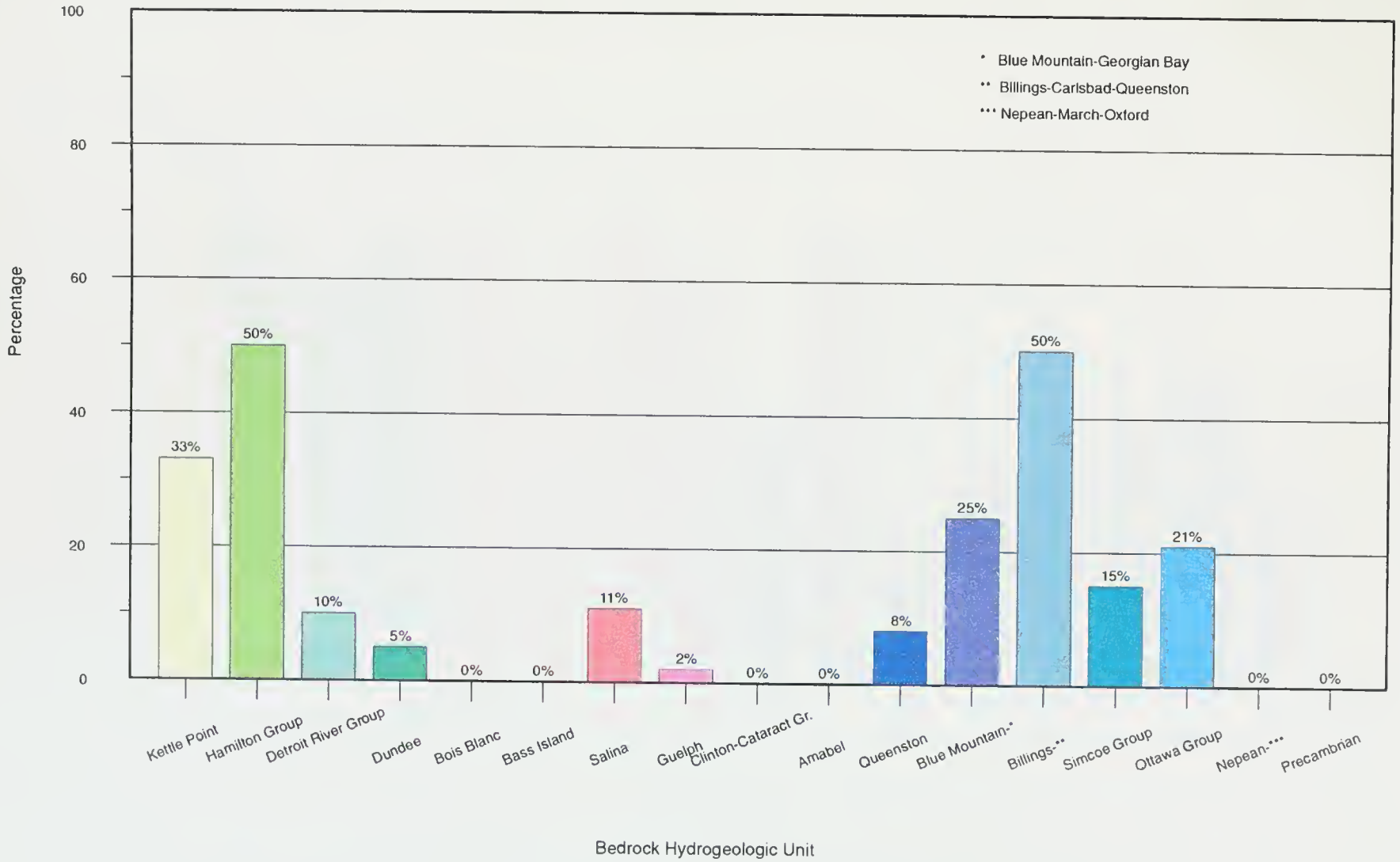

Figure 25. Percentage of samples exceeding the PDWO for sodium (200mg/l).

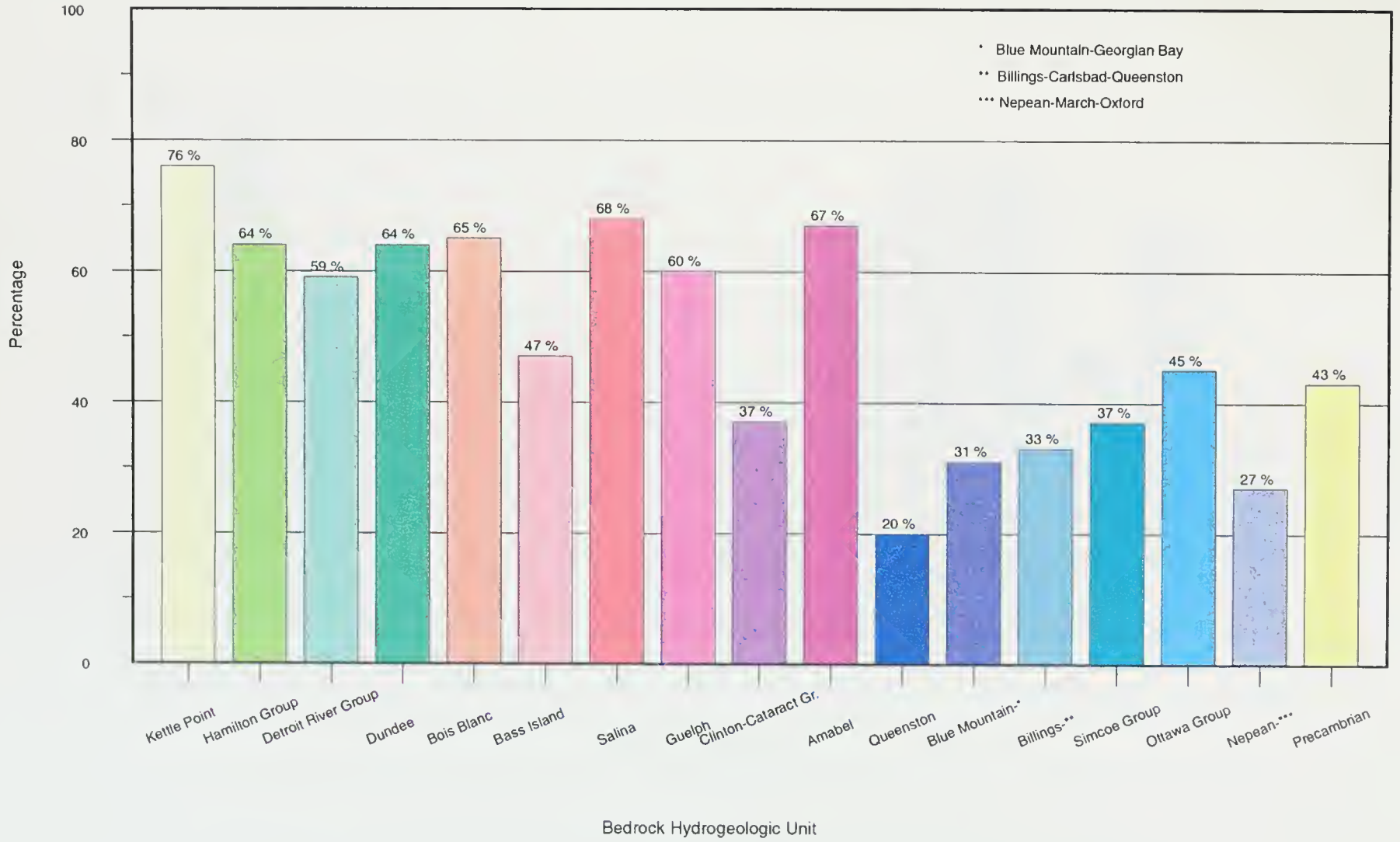

Figure 26. Percentage of samples exceeding the PDWO for iron (0.3 mg/l).

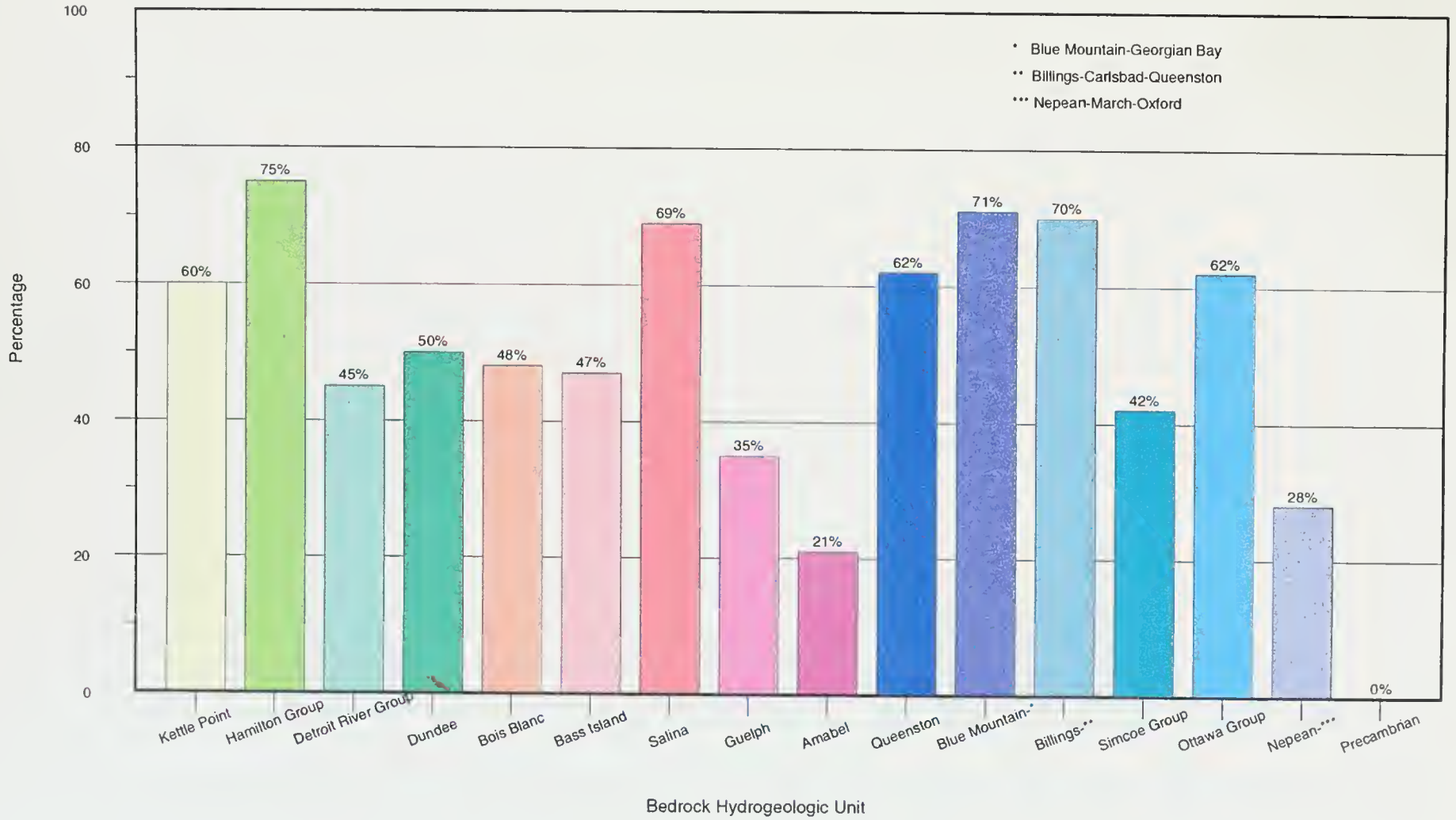

Figure 27. Percentage of samples exceeding the PDWO for total dissolved solids (500 mg/l).

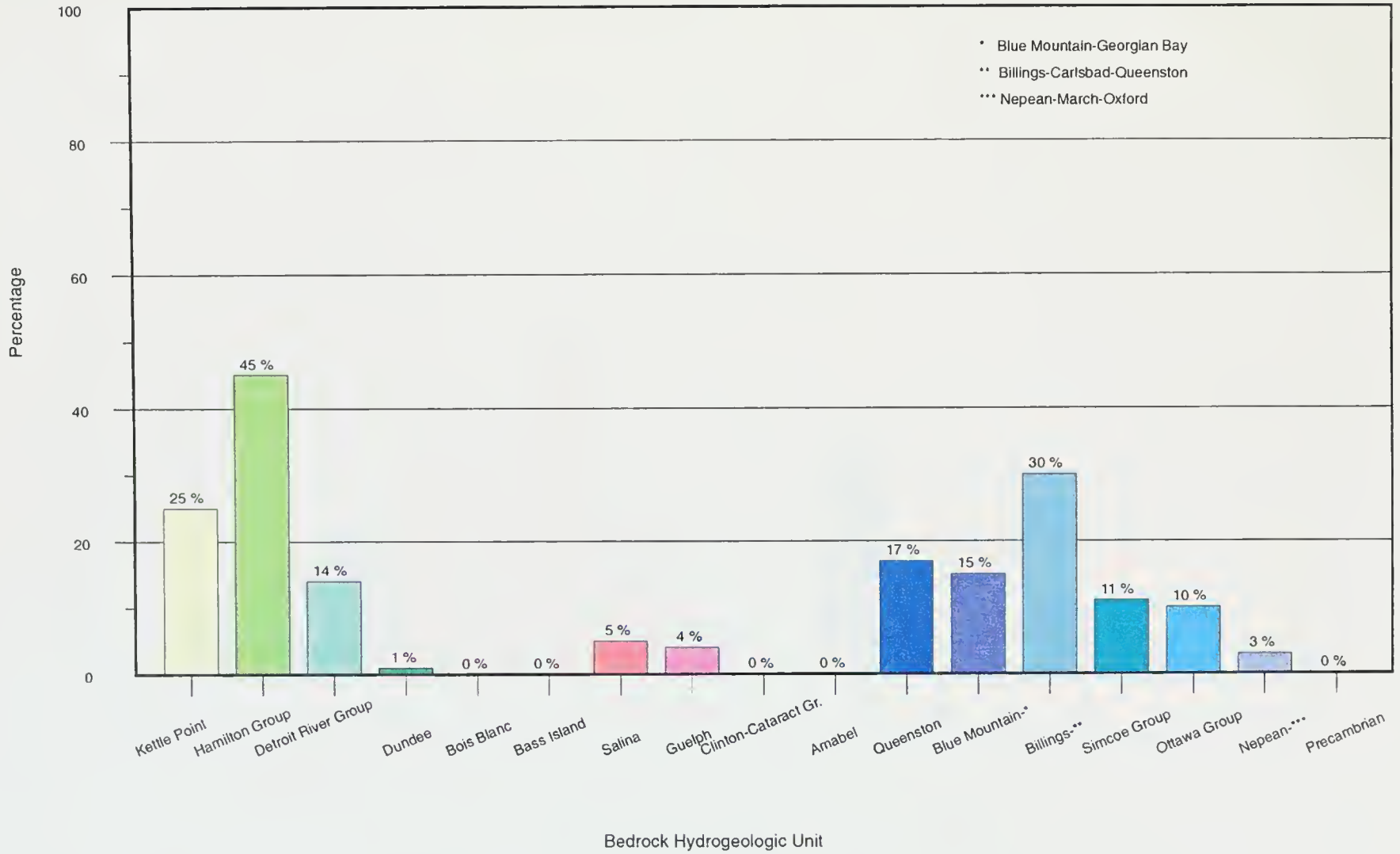

Figure 28. Percentage of samples exceeding the PDWO for chloride (250 mg/l).

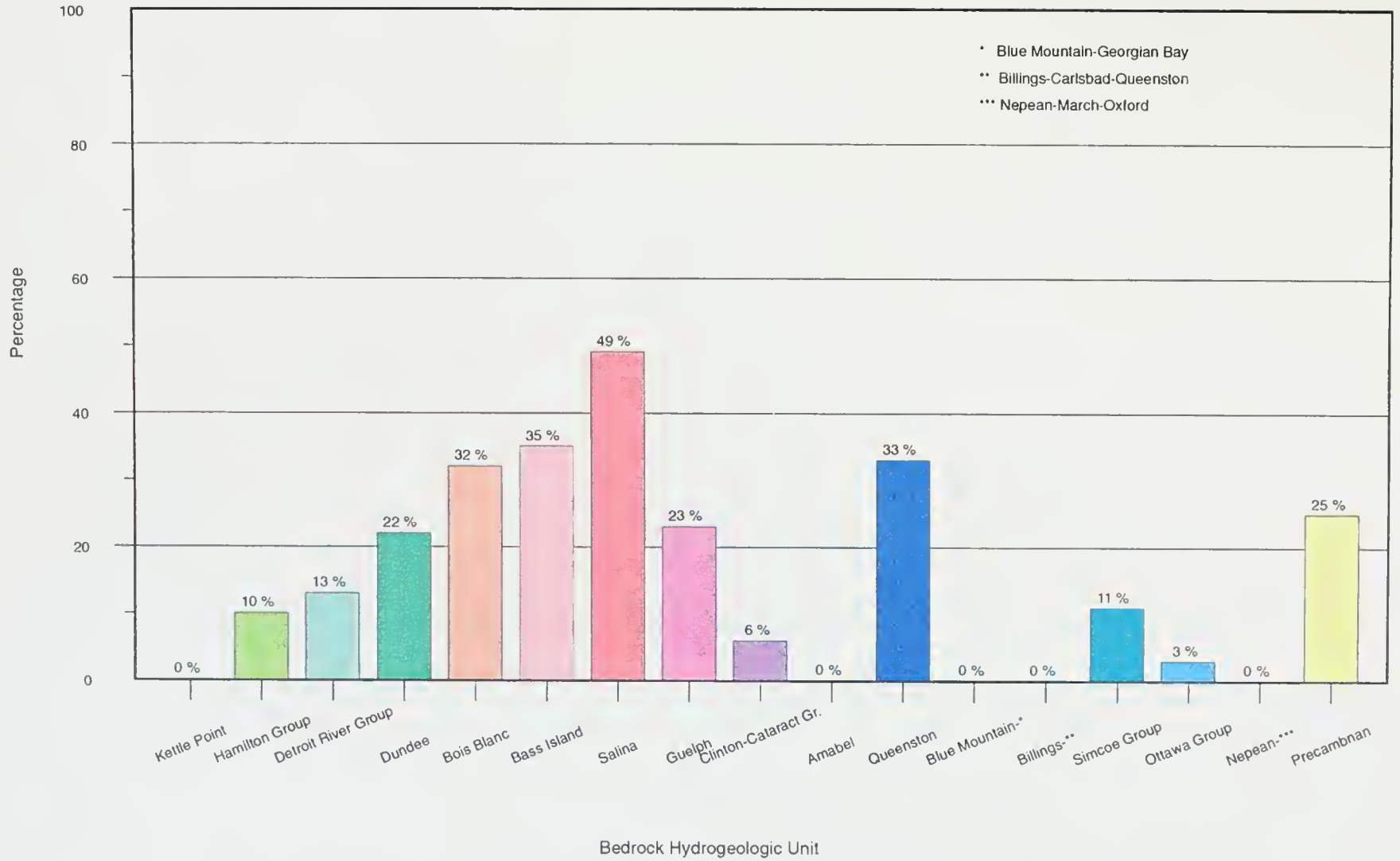

Figure 29. Percentage of samples exceeding the PDWO for sulphate (250mg/l).

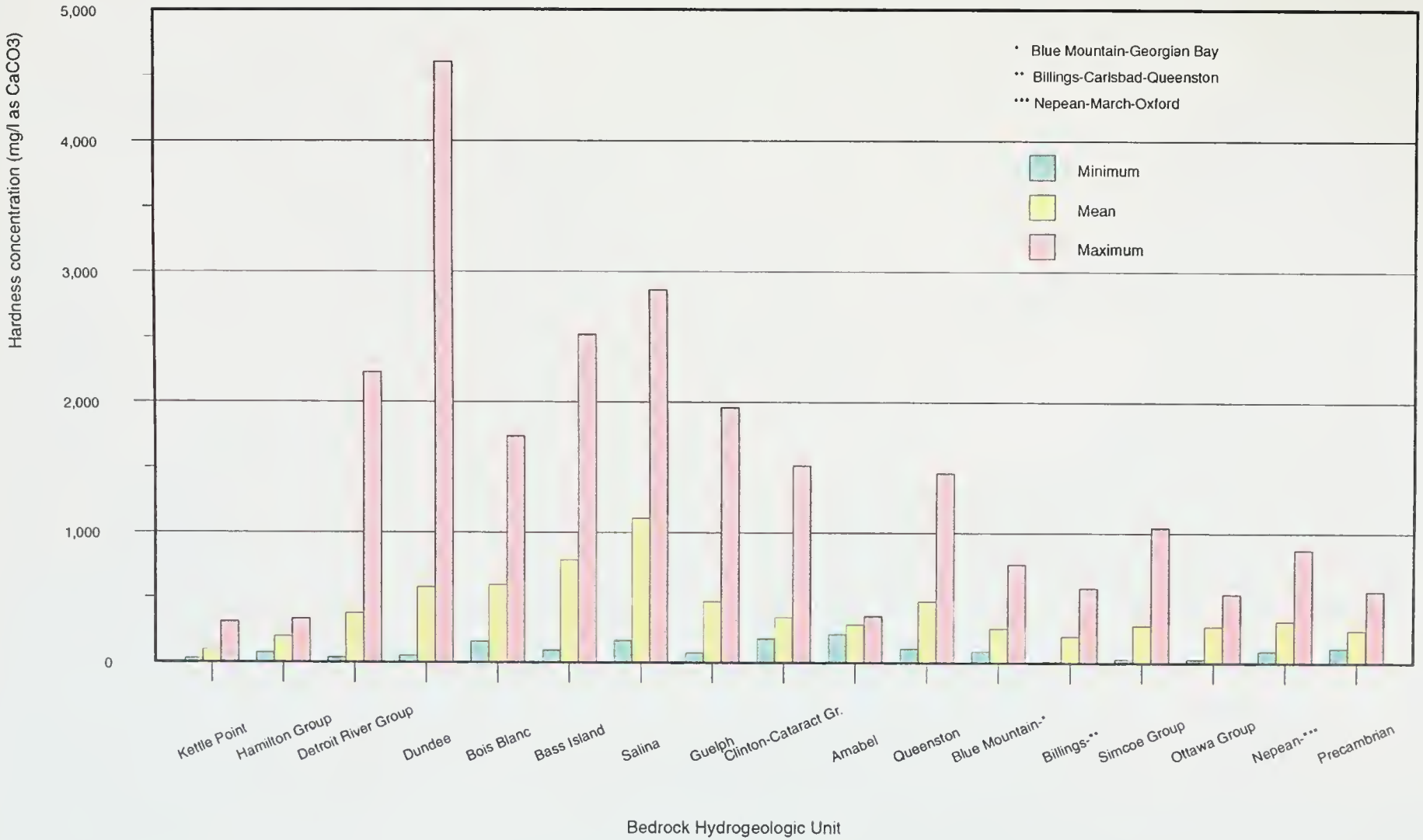

Figure 30. Minimum, mean and maximum levels of hardness for various bedrock hydrogeologic units.

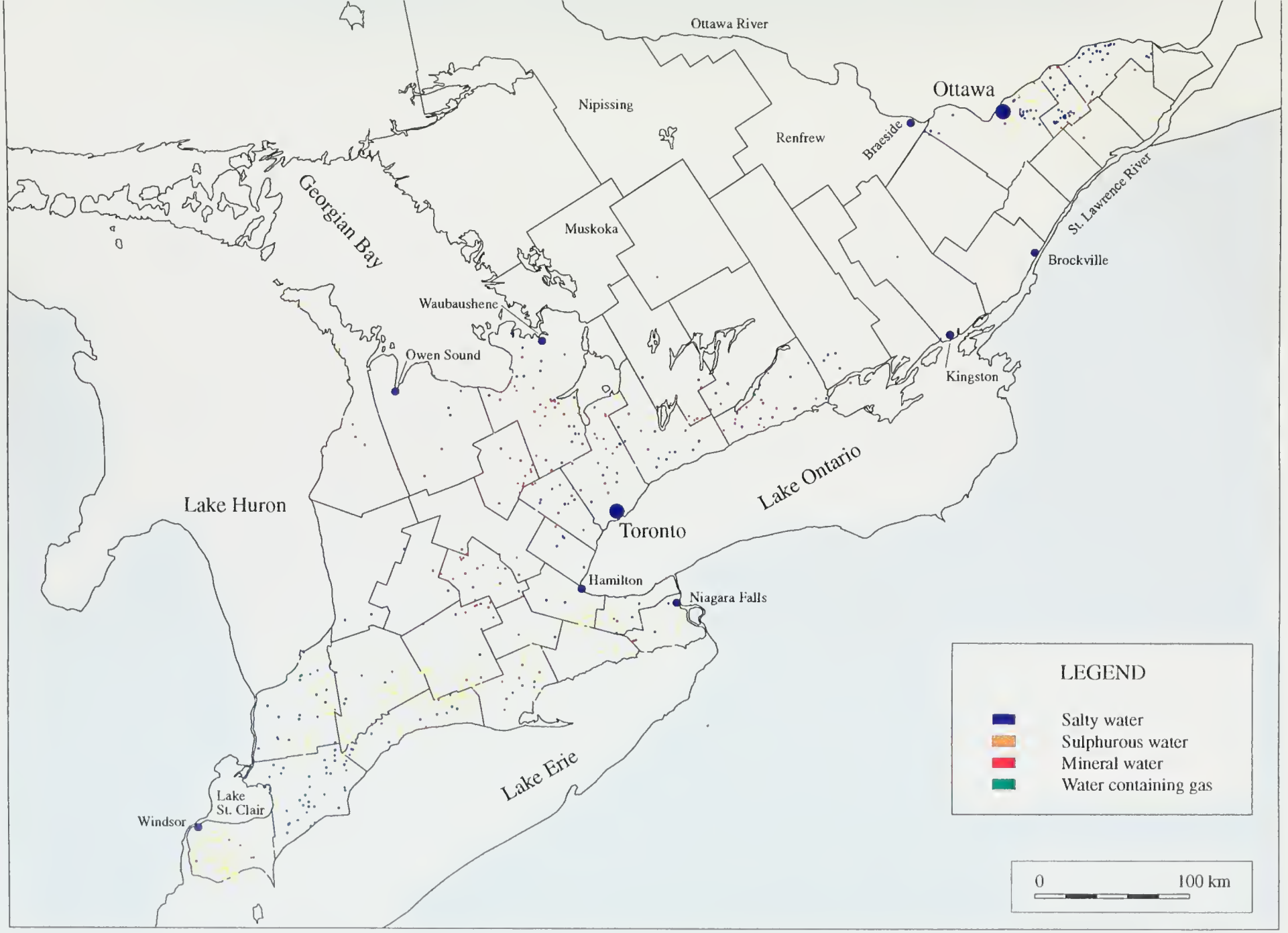

Figure 31. Overburden wells with natural water quality problems.